

Monstrous Fishes and the Mead-Dark Sea

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The Northern World

North Europe and the Baltic c. 400–1700 AD
Peoples, Economies and Cultures

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VOLUME 35

Monstrous Fishes and the Mead-Dark Sea

Whaling in the Medieval North Atlantic

By

Vicki Ellen Szabo



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For Alex, Marlee, Michaela, Zach, and even Leia.

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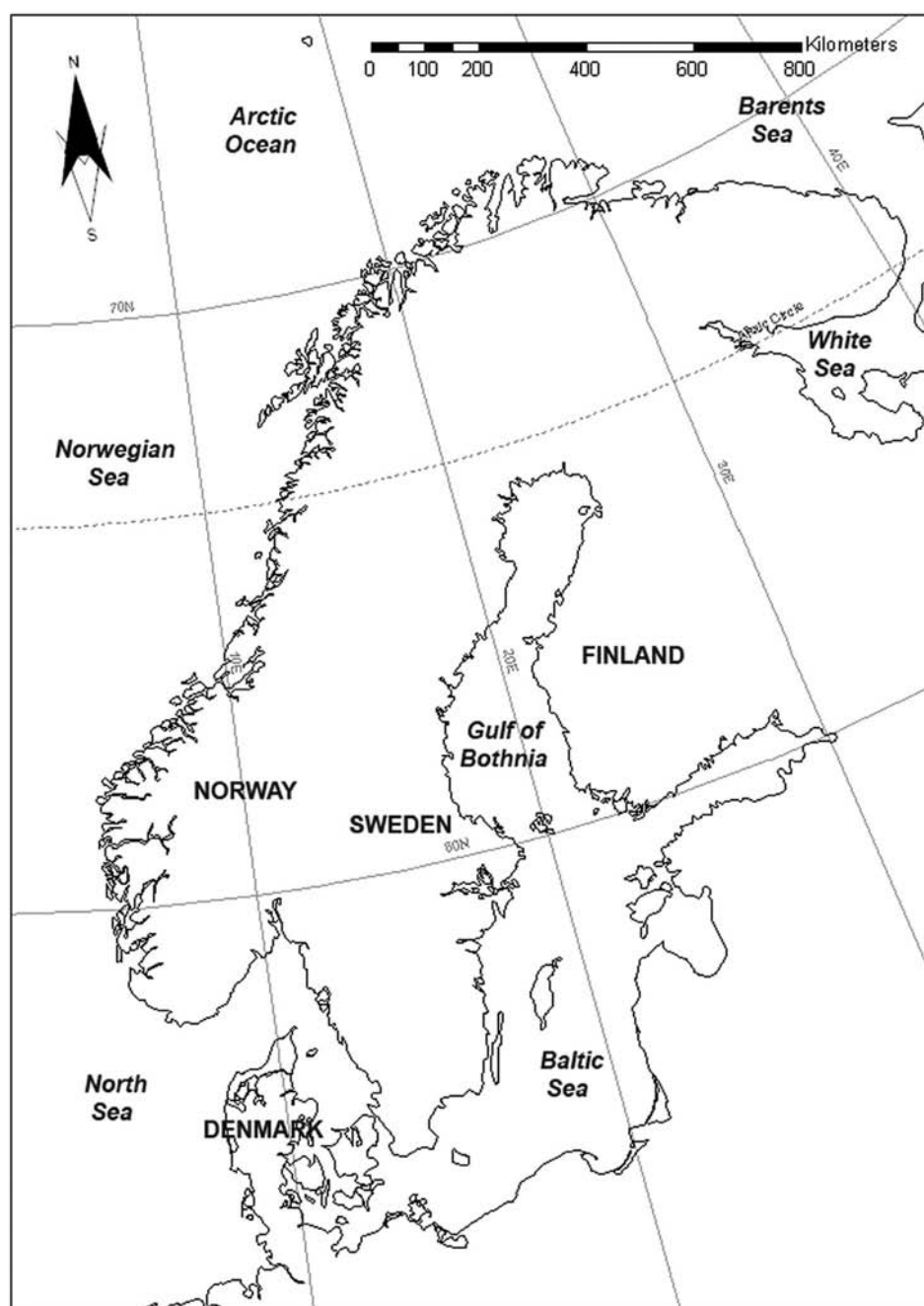
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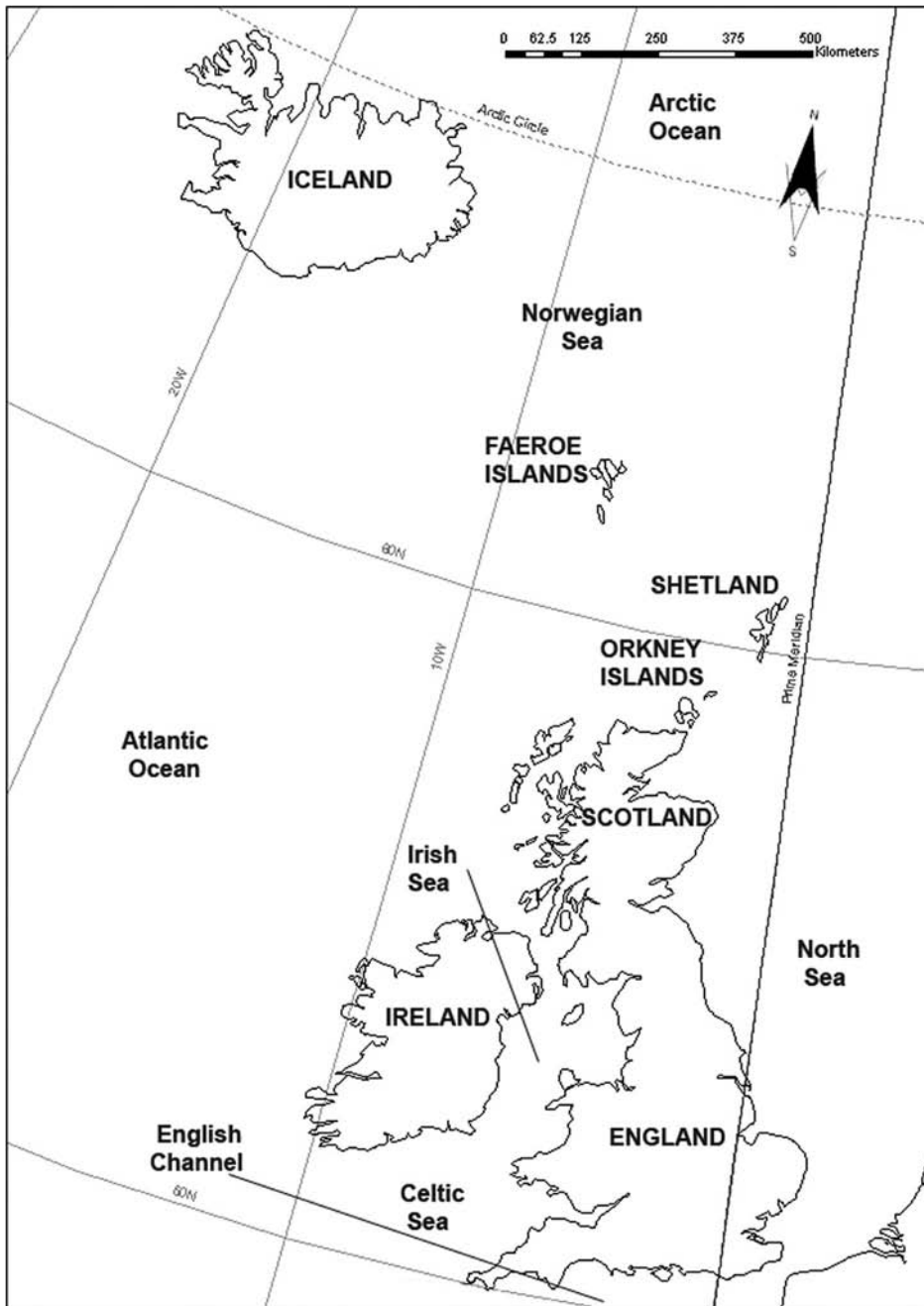
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MAPS

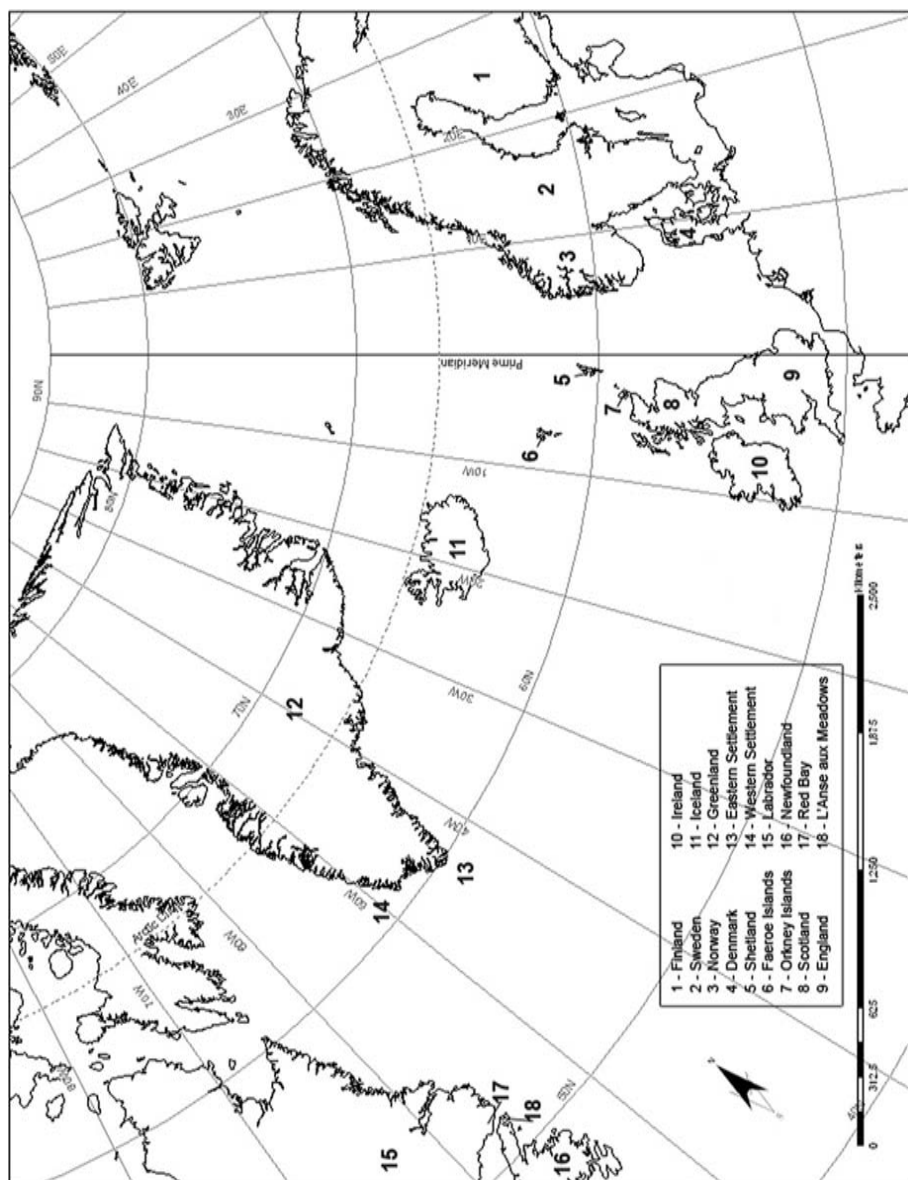
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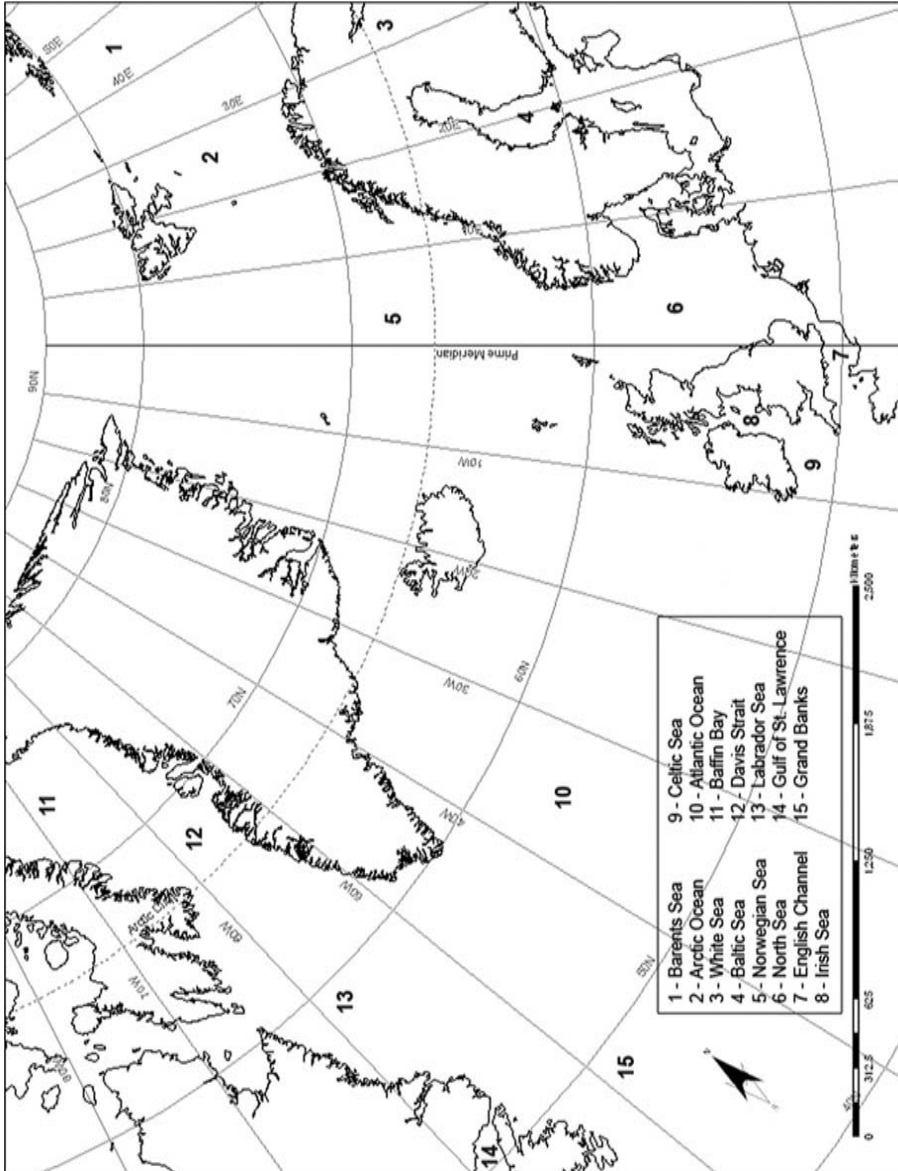
Map 1. Scandinavia



Map 2. Britain, Iceland and Northeast North Atlantic



Map 3. North Atlantic, land masses



Map 4. North Atlantic, oceans and seas

CHRONOLOGY

The comparative nature of this survey incorporates a number of overlapping periodizations. The following chronology provides a rough guide to the periods and terminology used in the text.

European prehistory

Neolithic	7000–2000 BC
Bronze Age	2200–750 BC
Iron Age	600 BC–AD 150/600
Late Iron Age	AD 200–600

Ancient World

Greek Archaic	700–500 BC
Greek Classical	500–300 BC
Hellenistic World	300–30 BC
Roman Republic	509–31 BC
Roman Empire	31 BC–AD 476

Middle Ages

Christian Late Antiquity	AD 200–800
Early Middle Ages	AD 500–1000
High Middle Ages	AD 1000–1300
Medieval Warm Period	AD 1080–1350
Late Middle Ages	AD 1300–1500
Little Ice Age	AD 1350–1550

Scandinavia/North Atlantic

Scandinavian Iron Age	500 BC–AD 800
Pre-Roman Iron Age	500 BC–1 BC
Roman Iron Age	AD 1–400
Germanic Iron Age	AD 400–800
 Viking Age	 AD 9th–11th centuries
Late Norse period	AD 11th–15th centuries
Golden Age of sagas	13th century

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I once was asked during a job interview, ‘So what will you work on when you’re finished with the whales? I stared blankly (too blankly, apparently—I didn’t get the job) because such a thought had never crossed my mind. I can now say with authority that I am still not finished with the whales. This book is the culmination of many years of research on what will probably remain a lifetime pursuit, hopefully not of Ahabian proportion or conclusion. This means that the following individuals, who have aided my research in innumerable ways, have more whales in store for them, as well.

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Cullowhee, NC
October 2007

INTRODUCTION



MUNDANE AND MARVELOUS WHALES IN THE MEAD-DARK SEA

Ottar was a wealthy Tromsø merchant and explorer who engaged the late ninth century court of King Alfred of Wessex with his tales of the wondrous North. Ottar traveled up the coast of Norway, “as far north as the whale hunters go at their furthest,” and then even further beyond.¹ He went to the land of the Beormas, where walrus hunting was good, but the whaling there didn’t meet his expectations. His country, he told Alfred’s court, had the best whaling: “...those [whales] are forty-eight ells long, the biggest fifty ells long; of these he said that he, one of six, killed sixty in two days.”² Ottar’s account offers a description of the great northern seas, full of massive and plentiful whales. What his account omits, though, is more telling, for he leaves out detail and drama. There are no great Melvillian tales of bold mariners or struggles for survival, nor descriptions of how these whales were hunted. He is detailed in the catch, but not in the catching. His tale could be a great fish story, but only the ‘fish’ were great and not the story.

¹ N. Lund, ed., *Two Voyagers at the Court of King Alfred: The Ventures of Ohthere and Wulfstan together with the Description of Northern Europe from the Old English Orosius*, trans. Christine Fell, 20 (York: William Sessions Limited, 1984).

² “...ac on his agnum lande is se betsta hwælhuntað: fla beoð eahta and feowertiges elna lange, & fla mæstan fiftiges elna lange; flara he sæde flæt he syxa sum ofsloge syxtig on twam dagum” (Lund, 20).

Ottar's whaling experience is an atypical medieval description of whale acquisition and use.³ A more realistic view of medieval whaling is found in the case of the humble Christian fisherman of *Ælfric's Colloquy*, a character who could be seen as the anti-Ottar. No whales for this fisherman, for they clearly posed too much of a risk to both men and equipment. "I prefer to catch a fish that I can kill," mused the fisherman, "rather than a fish that can sink or kill not only me but also my companions with a single blow."⁴ This fisherman sought a modest haul and no more. He neither looked for nor wanted to encounter a whale, and he sought no adventure.

Neither of these accounts, memorable as they may be, provides a fair model of whaling in the medieval northern world. From the outrageous exploitation of Ottar to the humility of *Ælfric's* fisherman, whaling in the medieval world offers an historical conundrum. Historians often contend that whales were scavenged in the Middle Ages and that hunting just didn't occur for two reasons: it was both unnecessary and technologically beyond the capabilities of medieval fishermen. "Whale bones are sometimes found on Anglo-Saxon sites, but these seem to have come from animals that were accidentally stranded, and claimed as a rare treat by the king or nobility."⁵ Such assumption seemingly finds accord in *Ælfric's Colloquy* yet flies in the face of Ottar's simple narrative of extraordinary catches of whales. But *Ælfric's Colloquy* also contends that this fisherman doesn't hunt whales, although that many others do to great profit. Either Ottar and *Ælfric* are exceptional accounts of early whaling or historical assumptions must be revisited.

Whales remain conspicuous in their absence from economic and cultural dialogues on the Middle Ages. Archaeological, literary and historical evidence indicates that they were pursued in both ancient and medieval Europe, sought out at sea and shore, scavenged when

³ The term 'whaling' is used throughout this text in its broadest sense, not simply in the sense of active pursuit and acquisition of whales at sea, but the general practice of whale exploitation.

⁴ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, trans. M. Swanton, 172 (London: J. M. Dent, 1993).

⁵ I. Friel, *Maritime History of Britain and Ireland* (London: British Museum Press, 2003), 44. Here, Friel correctly states that whale bones are found on Anglo-Saxon sites, but the assumption of stranding is not necessarily borne out by the meager evidence from most sites. Likewise, hunting cannot be assumed to have produced the bones. Friel incorrectly ascribes the possession of whales to kings and nobilities in this era, as whales are not yet considered exclusive royal or noble property prior to the Norman Conquest. While a minor example, this quotation exemplifies assumptions surrounding whale use.

stinking to high heaven, and the rotten subjects of legal and physical battles. Evidence abounds for the use of cetaceans as resources in the medieval world, but our knowledge of process, quantity, frequency and appreciation of whaling is scant. Our problem may begin with the whales themselves and the dark world that they occupy.

The ‘Mead-Dark Sea’ of the title, an homage to Homer’s ‘Wine-Dark Sea’ that drove so much of the action in the *Odyssey*, is undeniably the central actor in this narrative. The Mead-Dark Sea refers to the North Atlantic Ocean, its connected seas, and the creatures within.⁶ Like Homer’s Mediterranean, the North Atlantic waylaid travelers, swallowed ships whole, and abounded with monstrous creatures. Medieval Islamic geographers referred to the North Atlantic as “the Sea of Darkness, the Green Sea, the Encircling Sea...”⁷ Just as the Mediterranean shaped the classical frogs around that pond, so too the great Dark Sea influenced the development of the cultures that ringed its shores, for good and ill.

Within this northern sea, real and imagined species of whales abounded. Whales were equated with the wild seas that contained them or sometimes didn’t contain them, to the terror or glee of whalers and sailors. Understanding medieval perceptions of whales at times proves as murky as the dark North Atlantic itself, since medieval people viewed whales as great resources, but greater terrors. They were simultaneously marvelous and mundane. Cultural traditions with pagan roots permeated later Christian thought in creating complex views of good and bad whales. Recognition of this multiplicity of traditions behind perceptions of whales must inform any analysis of how whales were used historically. Likewise, historical analysis must begin with a reconstruction of those ancient whale populations, which differed from modern populations in number, size and perhaps even behavior. The preeminent question about medieval whale use, though, is whether these ‘kings of terror,’ as the whale cast from the sea is recast on the Franks Casket (Fig. 1), were sought out. Were whales pursued and hunted in the medieval North

⁶ For the purposes of this study, the North Atlantic refers to the area from roughly 50°–70° parallel, settled by Norsemen during the Middle Ages. The Norse North Atlantic, as it shall be henceforth called, will be defined further in chapter four’s discussion of North Atlantic whaling.

⁷ Al-Mas’ūdi, Murūj adh-Dhahab, cited in D. M. Dunlop, “The British Isles according to Medieval Arabic Authors,” *Islamic Quarterly* 4 (1957): 18.

Atlantic or were they passively scavenged? This is no simple tale of Ottar's pursuit or the fisherman's avoidance of whales.

The material and textual evidence presented in the following chapters reveals that whales provided crucial subsistence resources for medieval northern peoples. Medieval North Atlantic communities had access to whales and a greater need for them than many other peoples of contemporary Europe. Hunting and scavenging for whales was an essential strategy for survival in the north as environments, not to mention cultural influences, fluctuated and changed over the course of the Middle Ages.⁸ Whales were a necessary supplement to terrestrial economic and subsistence resources, and they were also spectacular creatures that captured authors' imaginations.⁹ The degree to which ideas about whales and the utility of whales coincided must be considered.

This book does not contend that whales were a mainstay of medieval diets, nor does it contend that whales were central within medieval

⁸ Chronology and periodization can be vexing issues with respect to the medieval world, for the fact that broad concepts of medieval chronology often overlap in the most awkward ways with traditional or regional chronologies. Broadly speaking, the Middle Ages traditionally are defined in three major divisions of early, high and late, corresponding respectively to the years AD 500–1000, AD 1000–1300, and AD 1300–1500. This rough periodization is unsatisfactory for it fails to apply in any uniform or meaningful way to developments across Europe. The simple convention articulates only the broadest patterns and changes in European development, namely the end of Rome, the rise of medieval kingdoms, and the catastrophes of the fourteenth century as broad turning points. “In general European history, the term ‘Middle Ages’ commonly refers to the millennium between the fourth to sixth centuries CE, when there was a breakdown of a Mediterranean-based, Roman political and social order, and the late fourteenth through sixteenth centuries CE, which saw the emergence of a self-consciously distinctive ‘modernity.’ Despite such generously hazy boundaries, this retrospective label based on traditional political and intellectual history poorly fits the observed chronology of major economic and social developments that affected interactions between Europeans and their evolving natural environment.” T. Whited et al., *Northern Europe: An Environmental History* (Oxford: ABC Clio, 2005), 45. Traditional medieval chronology is particularly unsatisfactory when considering the northern world, namely Scandinavia, northern Britain and the North Atlantic world. Periodization for the Norse world must also be subdivided, although major divisions are recognized between the Viking Age, ninth through eleventh centuries, and the later Norse period, of the eleventh through fifteenth centuries. Each of these periods may be further subdivided. Icelandic chronology and periodization will be discussed in a later chapter.

⁹ Hunting in many forms was a necessary supplement to agrarianism across the North Atlantic world. While seals, sea birds and terrestrial mammals were more common hunted resources, whales, both hunted and scavenged, were a great economic boon. On the supplemental role of hunting to agrarian economies in Iceland, see O. Vésteinsson, T. McGovern and C. Keller, “Enduring Impacts: Social and Environmental Aspects of Viking Age Settlement in Iceland and Greenland,” *Archaeologia Islandica* 2 (2002): 98–136.

thought. Rather, whales were important to medieval economies and their importance varied from settlement to settlement and from period to period. They were secondary resources, but resources nonetheless that ensured survival in times of hardship. The medieval world cannot be fully appreciated without consideration of the host of resources that its canny population foraged, scrounged and stole when necessary. Fortunately, little argument need be made for the importance of whales. The varied, fascinating and endlessly entertaining texts and physical evidence surveyed herein reveal as much by themselves. By bringing this material together in one study, the reader may easily see the value of whales, great and small, to the medieval world.

Despite the clear utility of whales across medieval Europe, our knowledge and understanding of whale use is complicated for many reasons. First, we have only partial knowledge of whale populations in our modern oceans, not to mention medieval oceans. Second, whales appear infrequently in medieval texts compared to ubiquitous domesticates or more common wild animals. Their textual appearances often are within literary and symbolic contexts, making it difficult to estimate their practical utility and economic worth. Third, their bones, from an archaeological perspective, are often too fragmentary to analyze in a comparable way with those of domesticates, yet hundreds of whale bone artifacts appear on North Atlantic archaeological sites in a regular array of object types. Analysis of whale bone has been largely ignored by zooarchaeologists trained to analyze domesticates, so much so that whale bones often are relegated to simple categories of 'large whale' and 'small whale,' with no attention to the species of whales found or used in any given region or upon any single site. Species identification of whale bone remains problematic, in part because complete comparative zoological collections for whale bone are rare.¹⁰ Finally, because of the nature of whale butchery, almost always completed on the shore rather than on a settlement site, whale bones are not uniformly found on archaeological sites in proportions that represent whale use. Thousands of pounds of meat and blubber may have been used on

¹⁰ A comparative skeletal collection (Fig. 23), as found at most major natural history museums, provides researchers with an array of the species found in a particular region. Most national museums may contain some cetacean species within their collections, but few or none have a complete array of all cetaceans, owing to difficulties in obtaining and storing such collections. These collections are typically only found at the largest national museums, thus making cetacean identifications a more challenging enterprise than the identification of smaller, more common mammals, fish or birds.

a site with only a few bones left to testify to that use. For this reason, whales have earned the nickname “the invisible resource.”¹¹ Whales are not alone in this regard: “Certain animal food products leave no remains that survive in most soil types. . . . Preservation chances can even hide information about the use of a species as a whole.”¹² Few archaeologists have looked to whale bones for insight into patterns of whale use or acquisition. This study aims to illuminate the economic impact of the invisible.

For these reasons, and despite all the evidence that we do have for whale exploitation, medieval whaling has not yet been analyzed systematically across sites and periods, or within texts. From drive-whaling to pelagic hunting, historians typically dismiss even the simplest whaling strategies from medieval practice. These assumptions about whale use may in fact be accurate, for it is likely that scavenging was the primary means of cetacean acquisition, but evidence that points to deliberate pursuit of cetaceans cannot be ignored. The economic realities of medieval life demanded exploitation of all available resources.

Misperceptions surrounding whale use do not stop with issues of acquisition. The consumption of whale has also been hidden as worked bones are seen as a result of raw material acquisition rather than a food resource:

... [It] has been argued that the large whale bones found within the medieval strongholds of Flemish feudal society represent no more than the waste of bone working. However, written sources reveal that whale meat was eaten at that time, that it was expensive and sought after by the feudal upper class. The fact that the bones of these animals were worked, after the attached meat was consumed, could thus hide the luxury status of whale within the sites studied.¹³

Historical scholarship on whales and whaling during the Middle Ages, with rare exception, has failed to integrate whales within the greater resource base of most medieval communities. Whales remain as marginal as the coastal peoples who used them most frequently. Whale use in the Middle Ages has been seen as “a classic example of uncontrolled

¹¹ J. Smith and J. Kinahan, “The Invisible Whale,” *World Archaeology* 16 (June 1984): 89–97.

¹² A. Ervynck et al., “Beyond affluence: the zooarchaeology of luxury,” *World Archaeology* 34, no. 3 (2003): 433. Ervynck et al. here refer to lampreys, cartilaginous fishes, and luxury meats, although this also holds true for whales.

¹³ Ervynck et al., 434.

predation by man on a marine resource.”¹⁴ Assumptions such as this one overlook evidence of regular, deliberate, legislated whale use as was typical in the Norse North Atlantic world and perhaps elsewhere.

One problem in appreciating the economic contributions of cetaceans in the Middle Ages is the nature of evidence. Historians and literary scholars have looked at whale use from a textual perspective, which may shed more light on cultural perceptions of whales, but oftentimes provides little evidence of how whales were actually used. Early historical studies by De Smet, Fraser, Jenkins, and Musset, and even Melville's great novel, provided important surveys of the essential texts of ancient and medieval whale use, but rarely delved into the practical realities of medieval whaling.¹⁵ More recent and sophisticated analyses of whale use in the North Atlantic by Proulx, Schnall, Riddler, Gardiner, and especially Lindquist have considered both material and textual evidence.¹⁶ Most other studies, however, do not fully consider both the utility of whales and the influential cultural perceptions held about them and their use.

¹⁴ W. M. A. De Smet, “Evidence of Whaling in the North Sea and English Channel During the Middle Ages,” in *Mammals in the Seas*, Food and Agriculture Organization of the United Nations, FAO Fisheries Series No. 5, Vol. III, 302 (Rome: FAO Advisory Committee on Marine Resources Research Working Party on Marine Mammals, 1981).

¹⁵ Important archaeological and historical surveys of medieval whaling include, but are not limited to, the following: W. M. A. De Smet, 1981; P. Fischer, “Cétacés du Sud-Ouest de la France,” *Actes de la Société Linnéenne de Bordeaux* 35 (1881): 5–291; F. C. Fraser, “Royal Fishes: The Importance of the Dolphin,” *Functional Anatomy of Marine Mammals* (New York: Academic Press, 1977), 1–44; J. T. Jenkins, *A History of Whale Fisheries* (London: H. F. & G. Witherby, 1921); C. Markham, “On the Whale-Fishery of the Basque Provinces of Spain,” *Proceedings of the Zoological Society of London* 63 (1881): 969–976; L. Musset, “Quelques Notes sur les Baleiniers Normands du X^e au XIII^e Siècle,” *Revue d'Histoire Économique et Sociale* 42 (1964): 147–157; A. Thomazi, *Histoire de la Pêche* (Paris: Payot, 1947).

¹⁶ M. Gardiner, “The Exploitation of Sea-Mammals in Medieval England: Bones and their Social Context,” *Archaeological Journal* 154 (1997): 173–195; O. Lindquist, *Peasant Fisherman Whaling in the Northeast Atlantic Area, CA 900–1900 AD* (Háskólinn á Akureyri, 1997); O. Lindquist, “Whaling by Peasant Fishermen in Norway, Orkney, Shetland, the Faroe Islands, Iceland and Norse Greenland: Medieval and Early Modern Whaling Methods and Inshore Legal Régimes,” in *Whaling and History*, eds. B. Basberg, J. E. Ringstad, E. Wexelsen, 17–54 (Sandefjord: Kommandor Chr. Christensens, 1995); J. Papadopoulos and D. Ruscillo, “A Ketos in Early Athens: An Archaeology of Whales and Sea Monsters in the Greek World,” *American Journal of Archaeology* 106 (2002): 187–227; J. P. Proulx, *Whaling in the North Atlantic: From Earliest Times to the Mid-19th Century* (Quebec: Parks Canada, 1986); I. Riddler, “Worked Bone,” in “An Anglo-Saxon and Medieval Settlement at Botolphs, Bramber, West Sussex,” ed. Mark Gardiner, *Archaeological Journal* 147 (1990): 260–262; Schnall, 1995.

The classic interdisciplinary study of premodern whale use is Grahame Clark's 1947 "Whales as an Economic Factor in Prehistoric Europe."¹⁷ Clark's was unquestionably the most far-reaching examination of prehistoric and medieval whale use, but his generalizations and uncritical use of historical, ethnographic and archaeological evidence from the Neolithic through the Middle Ages severely undermined his analysis. Clark asserted, among other ideas, that a body of Iron Age whale bone tools from the Foshigarry site in the Western Isles of Scotland was evidence of specialized whale butchering tools, tantamount to an early industry (Fig. 2). Clark's belief was based on the formal similarity between the Foshigarry objects and Greenland Inuit artifacts used for whale butchery. Because these Inuit and Scottish objects looked alike and were fashioned from the same material, Clark concluded they were used in the same way: "...Dr. T. T. Paterson informs me that he has observed similar mattocks used for removing blubber from a large whale driven ashore in the Disco Bay area of W. Greenland as recently as 1937. It is reasonable to suppose that the wheel-house and broch people of northern Scotland and the islands used their heavy whale rib mattocks for a similar purpose."¹⁸ These whale bone mattock blades were supposedly specialized flensing tools used to strip blubber from whale carcasses.¹⁹ Clark concluded that the Scottish 'mattock blades' were also a specialized technology developed to facilitate whaling in the Western Isles. Unfortunately, Clark's analogy failed on many points, particularly as Inuit mattocks described by Paterson were multifunctional tools, not used exclusively for flensing. Since the 1940's, Clark's blubber mattocks have been interpreted as flensing tools, peat-spades, ards, plough socks, oar blades, weapons and clubs.²⁰ Regardless of its weaknesses, Clark's article sets an important interdisciplinary precedent in whaling studies.

¹⁷ G. Clark, "Whales as an Economic Factor in Prehistoric Europe," *Antiquity* 21, no. 81 (March 1947): 84–104.

¹⁸ Clark, 1947, 97.

¹⁹ Clark, 1947, 95–96.

²⁰ D. V. Clarke, 'Small Finds in the Atlantic Province: Problems of Approach,' *Scottish Archaeological Forum* 3 (1971): 22–54; Y. Hallén, 'The use of bone and antler at Foshigarry and Bac Mhic Connain, two Iron Age sites on North Uist, Western Isles,' *Proceedings of the Society of Antiquaries of Scotland* 124 (1994): 203; A. MacGregor, 'The Broch of Burrian, North Ronaldsay, Orkney,' *Proceedings of the Society of Antiquaries of Scotland* 105 (1972–4): 86; T. Mathiassen, *Archaeology of the Central Eskimos: Report of the Fifth Thule Expedition 1921–24*, vol. IV, (Copenhagen: Gyldendalske Boghandel, Nordisk Forlag, 1927), 78–79.

Archaeological approaches to whale use since Clark have turned to the central question of whale acquisition, namely hunting or scavenging. Studies by MacGregor, Sjøvold, and Hallén have looked more broadly than Clark at evidence for whaling, and these authors have weighed in on the likelihood of an early whaling industry in the North Atlantic.²¹ Arthur MacGregor, in his 1974 report on the Broch of Burrian, stated that: "...there is one factor which favours the idea of deliberate hunting [of whales]: it may be implied that a fairly steady supply of cetacean bone would have been a pre-requisite for tool types in cetacean bone to have developed a degree of standardisation."²² Rather than looking for specific tools used in whale hunting or butchering as did Clark, MacGregor turned to the frequency of regular whale bone tool forms to assert a reliance upon whale bone as a raw material.²³ The standardized forms and types of tools at the Iron Age site of Burrian to which MacGregor refers include implements like long-handled combs and whale bone mattocks, similar to those described by Clark. MacGregor observed that the formal regularity of these objects, their occurrence on numerous sites along the western and northern seaboard of Scotland, and their frequent fashioning in whale bone, at least in the north, could imply a standardization of the material of production.²⁴

Thorleif Sjøvold also argued for the existence of standardized or exclusive forms of whale bone tools in northern Norway, namely linen-smoothing boards, weaving battens, and cleavers.²⁵ These artifact types, like others mentioned by MacGregor and Clark, suggest that whale bone was an important raw material in northern contexts. These items, however, do not exist in sufficient quantities, nor exclusively in whale bone, to prove a singular reliance upon this material. Critics such as

²¹ Hallén, 1994; MacGregor, 1972–4; T. Sjøvold, "Whale-bone tools in the Iron Age of North Norway," in *Actes du VII^e Congrès International des Sciences Préhistoriques et Protohistoriques*, Prague 21–27 Août, 1966, ed. J. Filip, 1200–1204 (Prague: Institut d'Archéologie de l'Académie Tchécoslovaque des Sciences à Prague, 1971).

²² A. MacGregor, *Bone, Antler, Ivory and Horn: The Technology of Skeletal Materials Since the Roman Period* (Totowa: Barnes and Noble Books, 1985), 106.

²³ This is not to suggest that whales would have been pursued exclusively for their bones, but if whale bone was a regularly-used raw material, a frequent supply of whales, or a stockpiling of whale bone, may be inferred.

²⁴ MacGregor, 1985, 82–84, figs. 12–13.

²⁵ Sjøvold, 1971, 1203. Most of the tools mentioned by Sjøvold are women's tools, found frequently as a group of whale bone weaving tools in women's graves, thus raising the question of whether whale bone was a raw material meaningfully associated with women.

Hallén have argued against the idea of a body of standardized whale bone objects, arguing that similar objects could have been fashioned from degradable materials that do not survive in archaeological contexts. Also, the lack of adequate dating on many early excavations discredits the idea of regular cetacean exploitation, as the amount of whale bone on any site may represent centuries of infrequent use: “assumptions about active whale hunting as a prerequisite for the manufacture and development of standardized types of cetacean bone tools seem to ignore the time-span of sites.”²⁶ Finally, critics have argued that a single large whale skeleton could provide the raw material for the entire whale bone assemblage at most early Scottish sites. Analysis of most assemblages, however, reveals a range of cetacean species and multiple animals on most sites, so the whale bone could not come from a single animal.

Today archaeologists have taken a different approach to whale bone analysis, especially isotopic and DNA analyses, as well as techniques adapted from terrestrial zooarchaeology for cetacean analysis.²⁷ These increasingly accessible technologies will provide the surest means of identification, as well as great insight into patterns of population change and species exploitation.²⁸ Other projects have sought to analyze artifact assemblages by more traditional means of species identification. Unlike

²⁶ Hallén, 199. The lack of firm chronological evidence on the Foshigarry, Dun Thomaidh, and Howmae sites excavated in from 1880–1930 provides unfortunate examples of poorly dated assemblages. E. Beveridge, E. “Excavation of an Earth House at Foshigarry,” *Proceedings of the Society of Antiquaries of Scotland* 65, no. 5 (1930–31): 302–22; J. G. Callander, “Excavation of an Earth House at Foshigarry, and a Fort, Dun Thomaidh, in North Uist with Notes on the Structures and the Relics Found in them,” *Proceedings of the Society of Antiquaries of Scotland* 65, no. 5 (1930–1): 322–357; J. Traill, “Notes on the Further Excavations of Howmae, 1889,” *Proceedings of the Society of Antiquaries of Scotland* 24 (1890): 451–461; J. Traill, “Notice of Excavations at Stenabreck and Howmae, in North Ronaldsay, Orkney,” *Proceedings of the Society of Antiquaries of Scotland*, 7 (1885): 14–33.

²⁷ H. Rosenbaum, et al. “Utility of North Atlantic Right Whale Museum Specimens for Assessing Changes in Genetic Diversity,” *Conservation Biology* 14.6 (December 2000): 1837–1842; J. Savelle and T. Friesen, “An Odontocete (Cetacea) Meat Utility Index,” *Journal of Archaeological Science* 23 (1996): 713–721; J. Savelle and A. P. McCartney, “Thule Inuit Bowhead Whaling: A Biometrical Analysis,” in *Threads of Arctic Prehistory*, ed. D. Morrison and J. Pilon, 281–310 (Ottawa: Canadian Museum of Civilization, 1994).

²⁸ Such means of analysis, though, are not without problems. DNA versus osteometrics will be discussed at length in chapter four in reference to recent work at Red Bay, Labrador. T. Rastogi, et al., “Genetic analysis of 16th-century whale bones prompts a revision of the impact of Basque whaling on right and bowhead whales in the western North Atlantic,” *Canadian Journal of Zoology* 82 (2004): 1650.

Clark and MacGregor who approached whale use via artifact types, new osteometric research strategies use artifacts and whale bone waste to isolate patterns in species reliance. If reliance upon a particular species is apparent in whale bone assemblages, deliberate acquisition may be determined, showing that medieval peoples may have selected certain species or animals for use.

The following chapters reveal medieval perceptions of whales in their conceptual value and practical utility from foundational Classical concepts through late medieval pre-industrial exploitation. Chapters one and two introduce the reader to the major evidence for medieval whaling in its broadest European context. Greek and Roman authors' writings on whales inspired both biblical tradition as well as common European folklore. Many concepts of what whales were, how they behaved, and what they were useful for originated in classical models and were adapted in later Christian and medieval narratives. Chapters three, four and five then delve into the practical problems of whaling history, including a general introduction to the North Atlantic ecosystem, and comparative consideration of prehistoric and ethnographic whaling practices from the Faroes to the Arctic. These chapters also allow the reader to burrow into a whale, its bones and the artifacts made from them, as well as flesh and other useful bits, for consideration of why whales were so important to medieval local economies. The book's final chapters, six through eight, offer a focused look at how medieval northern Europeans both thought about and used whales, isolating local Scandinavian perceptions about and uses of whales from broader European traditions. The highly entertaining and complex Icelandic family sagas and high medieval Scandinavian law-codes form the focus of this narrative, which clearly reveals the means by which whales could be and surely were acquired by North Atlantic hunters.

CHAPTER ONE



MEDIEVAL PERCEPTIONS OF THE NATURAL WORLD

Medieval Europe is most commonly envisioned as a world of farms, fields and villages tucked in among woodlands and wastelands. In this view, we see a world that subsisted on domesticated animals and cultivated crops. A more nuanced view of the medieval world reveals economic and subsistence diversity and a world troubled by competition for resources that varied by region and period. Subsistence hunting and scavenging played an essential role for communities on the economic and geographical edge of medieval Europe. While scavenging tends to evoke images of the marginal, seeking supplemental or even primary resources for survival, hunting is often seen as an activity of the elite, who bounded through those bucolic fields, woodlands and wastelands for sport rather than necessity. But hunting was also crucial to those who otherwise barely subsisted.

Hunting of wild animals provide material needs (meat, hides, bone, antler) and culturally varied leisure to medieval Europeans. Yet medieval hunting practices were culturally complex. For many elite males, hunting showed off their high social rank and maintained boundaries against their inferiors. On the other hand, various local or regional norms also allowed ordinary people to participate in some ways. Exceptions did occur often enough that the stereotype that only elites could and did hunt in medieval Europe should always be tested on firmly dated regional evidence, which may, indeed, reveal ambiguities.¹

¹ Tamara L. Whited, et al., *Northern Europe: An Environmental History* (Denver, CO: ABC Clio, 2005), 66.

Both hunting and scavenging were common and pragmatic solutions to the subsistence challenges caused by environmental, political or economic hardships faced by a majority of Europe's population. For those along Europe's shores, whales were an important scavenged resource, particularly in the Northern world, providing vast quantities of resources along the maritime fringes, including meat, oil, grease, bone, clothing, and architectural materials. Whales, along with fish, sea birds, and other marine mammals, supplemented cultivated resources and allowed people to survive simple shortfalls or long-enduring famines.² Whether imported to inland markets or used by the hunters or scavengers themselves, whales were unparalleled in what they could offer to medieval communities.

Beyond their material worth, whales engrossed medieval peoples and none more than the Norse, whose knowledge of whales, whale behavior and whale utility had no parallel in the Middle Ages. Knowledge of whales was nowhere greater than in medieval Iceland, which by its geography was ensured constant contact with migrating and local whale populations. Rugged individualism characterized Iceland, much like the Norwegian homelands of many Icelandic settlers: "Farmsteads . . . were independent. There were no villages or towns, no nucleated settlements at all . . . The goal of the household economy was self-sufficiency."³ This new landscape necessitated a hardy group of settlers who would exploit both land and sea intensively and ruthlessly in order to survive.⁴

² Whales could also be a food of choice, depending upon the portion. Royal predilection for whale tongue, for example, will be discussed briefly in chapter eight.

³ T. M. Andersson and W. I. Miller, *Law and Literature in Medieval Iceland: Ljósveitninga saga and Valla-Ljóts saga* (Stanford, CA: Stanford University Press, 1989), 11, 51.

⁴ Goodacre et al. suggest that the early settlers of Iceland may have been lone male colonizers who later established families, rather than whole families coming directly from the Norse homeland. Textual evidence indicates that many of the settlers may have come to Iceland after initial settlement in the British Isles. Recent analyses of Y-chromosomal and mitochondrial DNA (mtDNA) across the North Atlantic has revealed that Norse colonies closest to the Scandinavian homeland are characterized by more uniform male and female Norse populations, as reckoned by modern genetic descendants: "...the observed symmetry between Scandinavian mtDNA and Y-chromosome ancestry in Shetland, Orkney and the N&W coastline of Scotland suggests that roughly equal numbers of Scandinavian male and female subjects were involved in the colonization of these locations. In other words, the genetic evidence indicates a family-based Scandinavian settlement..." (133–134). Iceland, by contrast, reveals a much higher proportion of lone Scandinavian male settlers; "[Iceland's] founding population appears to have consisted largely of female subjects with a British/Irish ancestry and male subjects with a Scandinavian ancestry... [Migration] to insecure

The Norse North Atlantic settlements, often described as lands of plenty by the sagas, without doubt were lands of ecological challenges. Medieval Icelanders and their neighbors and kin in the Faroes and Greenland faced struggles with climate and competed for resources of all kinds. In times of hardship and shortage, there was no guarantee of food from a neighboring farm much less a town. Resources could be imported from Scandinavia or other colonies, but not during the roughest winters or over impassable seas. The early homesteaders of Iceland were dependent upon the land and the sea, and many sagas show chieftains and common farmers scouring beaches for resources during famine and storm. Whales and other marine resources featured prominently in their ecological adaptation, and when hardship necessitated reliance upon the sea, competition for resources could become fierce. The Icelandic sagas discussed in chapter seven amply attest to the furor caused over stranded whales. While fish was king in maritime trade and subsistence, whales too were of great importance in the sometimes meager North Atlantic world. Their significance, though, was not merely economic or material. Whales were also valuable symbols of good and ill in the medieval mind, as complex as the varied views held of the natural world as a whole.

Whales, like most other creatures of the land, waters, and sky, had a defined place in the medieval world. Even though animals routinely were used by ancient and medieval authors as a mirror of humanity, they existed primarily for their subservience and utility to humanity: "Plants are evidently for the sake of animals, and animals for the sake of Man; thus Nature, which does nothing in vain, has made all things for the sake of Man."⁵ The words of Aristotle in his *Historia Animalium* rang true centuries later throughout medieval Europe. His conclusions were bolstered by interpretations of Genesis I:28, which likewise was believed by many to assert the dominance of humanity over the natural world and its creatures: "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and

frontier areas tends to involve a disproportionate number of lone male colonizers" (132, 134). S. Goodacre et al. "Genetic evidence for a family-based Scandinavian settlement of Shetland and Orkney during the Viking periods," *Heredity* 95 (2005): 129–135.

⁵ Aristotle *Historia Animalium*, trans. A. L. Peck, Books IV–VI, Loeb Classical Library (Cambridge, MA: Harvard University Press, 1970), xli; quoted in J. Clutton-Brock, "Aristotle, the Scale of Nature, and Modern Attitudes to Animals," in *Humans and Other Animals*, ed. A. Mack, (Columbus: Ohio State University Press, 1995), 8.

over the birds of the air and over every living thing that moves upon the earth.”⁶ However, medieval perceptions of the natural world were neither so simple as Aristotle intimates nor as Genesis asserts.⁷ Both classical and medieval concepts of nature varied in complexity and appreciation. Pointed analyses of humanity’s role within the natural world are rare in premodern literature, so much of our evidence must be gleaned from indirect references or allusions from the works of poets, philosophers and historians. The most important viewpoints, those of the people who lived in, worked in, and exploited nature on a daily basis, namely farmers, fishermen, foresters and the like, unfortunately remain silent in the medieval historical record.⁸

Medieval perceptions of whales, both academic and popular, relied on classical precursors. Medieval scholastics like Albertus Magnus or the much later Olaus Magnus copied the writings of classical authors in their encyclopedic works, while popular works like bestiaries also found their origins in ancient models. Likewise, local and regional folklore derived from pagan and oral tradition must have maintained currency across medieval Europe. Perceptions of what whales were, how they behaved, and how they were to be used must be reconstructed with an eye to a multiplicity of traditions. Animals, like nature itself, were not simple constructs born of singular tradition.⁹

Ancient perceptions of the natural world, derived from authors of Archaic and Classical Greece and Rome, varied from appreciation to disdain to superiority to fear.¹⁰ The Greeks and later the Romans were hyperaware of their environment particularly because the natu-

⁶ *New Oxford Annotated Bible*, ed. B. Metzger and R. Murphy (New York: Oxford University Press, 1991), 3.

⁷ J. Cohen, ‘*Be Fertile and Increase, Fill the Earth and Master It*’: *The Ancient and Medieval Career of a Biblical Text* (Ithaca: Cornell University Press, 1989); R. Preece and D. Fraser, “The Status of Animals in Biblical and Christian Thought: A Study in Colliding Values,” *Society and Animals* 8, no. 3 (Brill, 2000).

⁸ J. Donald Hughes, *Pan’s Travail: Environmental Problems of the Ancient Greeks and Romans* (Baltimore: Johns Hopkins University Press, 1994), 70.

⁹ Prehistoric concepts of whales, or even nature, are more difficult to determine for want of evidence. “The adoption of agriculture did not revolutionize attitudes toward nature, though more casual accounts insist on the advent of linear thinking and a more alienated, domineering stance toward the natural world. Here as well, evidence is hard to come by.” Whited et al., 29.

¹⁰ Chronological definitions for the Greek Archaic are 700–500 BC, and the Classical era, 500–300 BC. Roman antiquity is traditionally defined by the stages of the Monarchy (753–509 BC), the Republic (509–31 BC) and the Empire (31 BC–AD 476). The latter period, in particular, may be subdivided further into the Principate, ca. 31 BC–AD 284 and the Dominate, AD 284–476. The Dominate overlaps with Christian

ral world rustled with deities and supernatural forces that demanded and deserved their respect: “None of the great Greek or Roman gods, and few of the minor ones, lacked identification with elements of the natural world.”¹¹ Reverence for nature was akin to prayer and as early as Hesiod, ca. 650 BC, the Greeks knew that disrespect of nature translated to impiety. For example, Hesiod chided his audience for urinating in a river or springs, as such acts were not only ecologically foul, but also offensive to the gods: “avoid this strictly—nor void your vapours in them; that is not advisable. And never step across the fair-flowing water of ever-running rivers until you have prayed, looking into the fair stream, after washing your hands in the lovely clear water. If a man crosses a river without cleansing his wickedness and his hands, the gods look askance at him and give him woe later.”¹² Nature, ergo the Gods, demanded respect. Does this mean the ancients were lovers of nature, full of reverence for the non-human spirits that occupied their lands? Yes and no. Some classical authors depicted humanity as yet another part of the natural world, while others saw mankind as separate from or even above nature. Classical perceptions of the natural world reveal a complexity beyond the simplest medieval attributions of natural elements and forces to God’s power.

Traditionalists, the pious and poets, like Hesiod, Virgil or Pythagoreans, certainly expressed reverence for the natural world, but natural philosophers, “who questioned or denied the activity of the gods in the world” saw through the “mythological explanations of the world [and] older attitudes weakened.”¹³ Greeks and Romans, despite their acknowledgement of nature’s power, were also pragmatists who knew how to exploit their environments, sometimes too effectively. Roman engineering changed the face of classical Europe, with roads, aqueducts, bridges, and mines. The Greeks deforested large swathes of central and southern Greece by the early Classical era.¹⁴ Animals were

Late Antiquity, ca. AD 200–800, where the survey of Classical attitudes ends and medieval attitudes, characterized by a Christian world view, must begin.

¹¹ J. Donald Hughes, “Early Greek and Roman Environmentalists,” in *Historical Ecology: Essays on Environment and Social Change*, ed. L. Bilsky, 45 (Port Washington, NY: Kennikat Press, 1980).

¹² Hughes, 1994, 52; Hesiod, *Theogony, Works and Days*, trans. M. L. West (New York: Oxford University Press, 1999), 59.

¹³ Hughes, 1994, 45.

¹⁴ Hughes devotes chapter five of *Pan’s Travail* to deforestation: “No environmental problem of the Greeks and Romans was as widespread and prominent as the removal of forests and the ensuing erosion” (Hughes, 1994, 73).

captured and bred for entertainment on a grotesque scale, Emperor Augustus boasting thousands of animals brought to Rome for games in his reign alone.¹⁵

The contrasting attitudes of reverence and exploitation were found across classical Greece and Rome, influencing how ancient people used the natural resources at their disposal. Among those natural resources were the animals that were used for labor, ritual, warfare, entertainment, industry and of course food.¹⁶ Some animals, then as today, were revered and protected while others were exploited with great aplomb. The attitudes of classical peoples to their environments and the living things within were long-lived as they were transmitted across medieval Europe. This transmission occurred on several levels, including long-standing oral traditions, but also by the literate monastic and clerical populations who built upon the foundations of their classical predecessors.

Pagan European perceptions of nature were similar to the classical in many ways, as both traditions attributed forces of nature to a polytheistic pantheon of deities. Germanic and Scandinavian polytheism saw the world divided among the great deities, the Æsir, with a host of lesser divinities controlling portions of local ecosystems. Both sets of perceptions posited an active and animated universe that forced an awareness and respect for divinities embedded within and embodied by the natural world. Our knowledge of pagan European belief systems, though, originates with classical authors and their often misguided perceptions of Germanic beliefs, or from later Christian sources, reporting in retrospect or from afar on the aberrant beliefs of heathens. Many of these Christian sources are considered untrustworthy representations of the pagan world view, “recorded as much as two or three hundred years after the conversion, . . . [with] the possibility of prejudice, misinterpretation, or deliberate editing when non-Christian beliefs are being dealt with . . .”¹⁷ The rare source like *Beowulf* allows what may be realistic

¹⁵ Velleius Paterculus *Compendium of Roman History and Res Gestae Divi Augusti*, trans. F. W. Shipley (Cambridge, MA: Harvard University Press, 1961), 22. “In my own name, or that of my sons or grandsons, on twenty-six occasions I gave to the people, in the circus, in the forum, or in the amphitheatre, hunts of African wild beasts, in which about three thousand five hundred beasts were slain” (383).

¹⁶ J. M. C. Toynbee, *Animals in Roman Life and Art* (Ithaca, NY: Cornell University Press, 1973).

¹⁷ H. R. Ellis Davidson, *Gods and Myths of Northern Europe* (New York: Penguin Books, 1990), 15.

insight into pagan perceptions of the natural world and its fantastic and fearsome creatures, albeit in a form in which pagan thought is suffused with Christian allegory.

There clearly is no single classical or medieval view of the natural world. Medieval attitudes towards the natural world, though, have been more oversimplified than the classical, homogenized and distorted into a sort of virulent anthropocentric hubris.¹⁸ Sorrell traces this monolithic characterization of medieval attitudes back to historian Edward Gibbon:

...Gibbon's fiery condemnation of the 'ascetic epidemic' itself infected historians who followed him, leading to gross overgeneralizations and to the creation of the myth that there was basically only one medieval view of nature—that of fanatical monks (usually nameless), who were pathetically unable to appreciate their natural surroundings due to their pathological suspicion of demonic temptation through the sensory world...¹⁹

Lynn White Jr. attributed medieval superiority over nature to the era's greatest technological innovation, the heavy plow: "Man's relation to the soil was profoundly changed. Formerly man had been part of nature; now he was the exploiter of nature."²⁰ But not all medieval 'exploiters of nature,' as White posits this radical shift of being, were comfortable that they did in fact dominate the natural world. Medieval attitudes towards nature, at times based on classical ideas, at times based on autochthonic beliefs, were as varied as the medieval environment itself.

Medieval views of nature ranged from fear to appreciation, from desires to conquer the natural world to desires to live within it. Sorrell categorized medieval approaches to nature into classical or poetic, scientific or philosophic, and folk or barbaric schools.²¹ The poetic mode of thought was derived "either from mere love of classical models or from actual appreciation for creation..."²² The scientific or philosophic mode borrowed liberally from natural philosophers and encyclopedists of classical antiquity, combining "observation from antiquity... with

¹⁸ Roger D. Sorrell, *St. Francis of Assisi and Nature: Tradition and Innovation in Western Christian Attitudes toward the Environment* (New York: Oxford University Press, 1988), 3.

¹⁹ Sorrell, 3.

²⁰ L. White Jr. "The Historical Roots of our Ecological Crisis," *Science*, New Series 155, no. 3767 (March 10, 1967): 1205.

²¹ Sorrell, 10.

²² Sorrell, 12.

Christian interpretation.”²³ Finally, the so-called ‘Folk’ or ‘Barbarian’ tradition included both written and oral transmissions from antiquity, in the form of epics, poems, stories and songs.²⁴ All of these intellectual and cultural legacies from antiquity influenced medieval thought, but none predominated. The one certainty that dominated medieval thought was the idea that God’s hand was seen in all of creation. “The Christian was living in God’s direct handiwork. It followed that everything in it was instinct with meaning.”²⁵ But what to do with that gift, or in some cases that curse, from God’s hand? The hospitable land and resources were the subject of thanks, while the hard-won arable, the hostile seas, or the dangerous creatures could be seen as God’s tests for the spiritually challenged.

Underlying medieval thought there existed a deep current of symbolism. No landscape, coastline, animal, plant, or natural phenomenon was as simple as it appeared in its physicality. The whole of the medieval world, not unlike its classical precursor, was active and animated and potentially dangerous to one’s eternal soul, for every landscape and every creature was imbued with symbolic and moral significance. Survival within nature seems to have been a more typical concern for medieval peoples than its domination, despite any interpretation of Genesis to the contrary.

While the natural world could be physically and spiritually dangerous, the environment and its creatures also could be perceived as a celebration of God’s power and beneficence. Christianity from its earliest days offered examples of bucolic splendor and spiritual rewards of living within the wilds, at least for those few saints who were able to avail themselves of these joys.²⁶ This view of the natural world is contrary to Gibbon or White’s perceived medieval dominance and disdain of nature.²⁷ Sorrell notes that “early holy men ‘had a positive love for

²³ Sorrell, 12. Ninth-century philosopher and theologian John Scotus Eriugena is an exemplar of this school, having “created an original synthesis of Christian doctrine with classical philosophy. He envisioned a universe which, despite the fall from its first purity, was permeated with divine goodness and progressing toward restoration” (Sorrell, 13).

²⁴ Sorrell, 14.

²⁵ French, 276.

²⁶ M. Cartmill, “Hunting and Humanity in Western Thought,” in *Humans and Other Animals*, ed. A. Mack, 369 (Columbus: Ohio State University Press, 1995).

²⁷ Coulton, in his 1923 Church history, wrote that “The Church suspected nature: seldom does a monastic writer describe the beauties of the field or forest or water; and even then, perhaps, only to mark how short a step from those delights to the pains

the stark beauty of their wilderness...’ [that] was startlingly original and unclassical.”²⁸ Within that wilderness, animals could be seen as heaven-sent or hell-bent.

Even though animals were frequently viewed as denizens of the devil, as seen in Athanasius’ *Life of Anthony* or St. Jerome’s *Life of Hilarion*, animals also aided holy men in their travails within nature.²⁹ St. Francis is perhaps the most well-known celebrant of the natural world, minister to man, beast and birds. His famous sermon to the birds invests his feathered followers with an innate spiritual appreciation: “the birds exulted marvelously in their own fashion, stretching their necks, extending their wings, opening their mouths, and gazing at him.”³⁰ St. Cuthbert received succor from animals on numerous occasions according to his vita. His best fortune came from the sea, when Cuthbert was rewarded by nature and its creatures after an evening of prayer spent “up to his arms and neck in deep water... Then two otters bounded out of the water; stretched themselves out before him, warmed his feet with their breath, and tried to dry him on their fur. They finished, received his blessing, and slipped back to their watery home.”³¹

Medieval perceptions of the natural world varied as greatly as the land and its creatures, but it is fair to state that few medieval world-views were devoid of fear, awe, respect, and reverence, or some combination thereof, for the environment. Neutrality and pragmatism regarding the natural world and its creatures may have existed among those who lived closest to nature, but their views are rarely found within the medieval corpus of texts. The common element in most medieval perceptions

of hell... Nature was cursed since the Fall.” G. C. Coulton, *Five Centuries of Religion* (Cambridge: Cambridge University Press, 1923), 179.

²⁸ Citty, cited in Sorrell, 16.

²⁹ Both the *Life of Anthony* and the *Life of Hilarion* offer numerous examples of challenges, temptations, and threats made to the saints by various creatures of the deserts. An old man in the *Life of Hilarion* explains that “in order to harm people the devil also enters into animals...” Jerome, “Life of Hilarion,” in *Early Christian Lives*, ed. and trans. C. White (New York: Penguin Books, 1998), 104.

³⁰ Thomas of Celano, “First and Second Lives of St. Francis,” Trans. David Burr, *Internet Medieval Sourcebook*, ed. P. Halsall <http://www.fordham.edu/halsall/source/stfrancis-lives.html> (accessed 12 August 2004).

³¹ Bede “Life of Cuthbert,” in *The Age of Bede*, trans. by J. F. Webb (New York: Penguin Books, 1983), 56. St. Cuthbert also received freshly cut dolphin meat while suffering travails of sea travel.

was that God had made the natural world and had filled it with innumerable hardships, wonders and joys for humanity.³²

While landscapes were themselves meaningful spiritually, socially, economically, and culturally, the creatures that inhabited these lands were equally important and meaningful to medieval minds. On the most practical level, animals were of paramount importance to human survival for food, resources, protection, and labor. This simple utility, though, did not overshadow their moral utility. Animals were also metaphors for moral or immoral behavior. Medieval men and women viewed the animal kingdom from a myriad of perspectives, ranging from the keen eye of the natural philosopher, the allegorizing gaze of the monk or theologian, to the savvy eye of the hunter or merchant.³³ “We know that animals function in many cultural domains, from the basics of subsistence to complex symbols woven throughout a society.”³⁴ The rationale behind such classifications is based on observation of a given animal’s characteristics, appearance and behavior. While modern societies’ images of animals and their value are based on centuries of belief or tradition, perhaps to the extent that the rationale for these perceptions is long forgotten, ancient and medieval cultures often made their conceptions and beliefs about animals explicit through theological exposition, fable or myth.

One pitfall in studying medieval perceptions and use of animals is our ascription of an animal to a single conceptual category, for any creature could potentially function in several conceptual classifications simultaneously.³⁵ An animal can be good to eat and symbolically

³² It must be remembered that the medieval world was not homogenous or even wholly Christian in world view. Paganism and classical thought suffused both elite and common perceptions of the classical world and it can be difficult to isolate the two ideas in practice.

³³ Texts on the subject of animal perceptions, animal/human relations include: R. Baxter, *Bestiaries and their Users in the Middle Ages* (London: Sutton Publishing Ltd., 1998); E. Cohen, “Animals in Medieval Perceptions: The Image of the Ubiquitous Other,” in *Animals and Human Society: Changing Perspectives*, eds. A. Manning and J. Serpell, 59–80 (New York: Routledge, 1994); N. Flores, ed., *Animals in the Middle Ages* (New York: Garland Publishing Inc., 1996); D. Hassig, *Medieval Bestiaries: Text, Image, Ideology* (New York: Cambridge University Press, 1995); J. Salisbury, *The Beast Within: Animals in the Middle Ages* (New York: Routledge, 1994); J. Salisbury, ed. *The Medieval World of Nature* (New York: Garland, 1993).

³⁴ P. Wapnish, “Towards Establishing a Conceptual Basis for Animal Categories in Archaeology,” in *Methods in the Mediterranean: Historical and Archaeological Views on Texts and Archaeology*, ed. David B. Small, 233–4 (New York: E. J. Brill, 1995).

³⁵ R. French, *Ancient Natural History: Histories of Nature* (New York: Routledge, 1994).

potent at the same time. A lamb, for example, was both an important economic resource and a Christian symbol. Likewise, whales could be monsters at sea and mundane as meals. In order to understand medieval concepts of any given animal, a host of medieval perceptions must be appreciated, including what an animal provided to a community in labor or resources, or whether it possessed symbolic or ideological value. The potential conflict between practical utility and symbolic meaning must be considered, for perceptions of an animal could impact how it was used or pursued.³⁶ Salisbury, in *The Beast Within*, concludes that metaphorical meanings behind perceptions of animals “probably did not change the way [people] looked at the many real animals that were serving them...”³⁷ Yet Olaus Magnus records the belief of sixteenth-century Norwegians that whale bone houses held some magical powers that forced their occupants to dream of tempests and shipwreck. Sometimes the mundane retained the magical and the animal intruded upon or threatened the human world. Whales, perhaps more than any other animal, existed in a multiplicity of meanings in medieval thought. They were good to eat, but bad to encounter, both fascinating and frightening even when dead on shore. The fusion of classical, pagan and Christian thought is well observed in accounts of whale encounters, magical, monstrous, and mundane.



In 1996, Richard Hoffmann wrote that “...Scholars have examined medieval woodlands, wetlands, pastures, and fields, and in recent years have even done this from environmental as well as economic perspectives. Not so for waters and especially not for waters as habitats for living organisms.”³⁸ Through the work of Hoffmann and others, maritime studies have moved in the past decade to the forefront of medieval environmental history. With a host of works looking at specific

³⁶ H. Ólafsson, “The Hunter and the Animal,” in *The Anthropology of Iceland*, eds. E. Paul Durrenberger and Gísli Pálsson, 39–49 (Iowa City: University of Iowa Press, 1989). Ólafsson questions whether hunters’ perceptions of foxes impacted or influenced the hunt. Similar questions should be asked of other species as well.

³⁷ Salisbury, 1994, 9.

³⁸ R. Hoffmann, “Economic Development and Aquatic Ecosystems in Medieval Europe,” *American Historical Review* 101 (1996): 632.

maritime industries, and others looking at a broader issues in maritime studies, few now could contend that the medieval seas are overlooked. But despite this new attention to all things marine, most general studies of the medieval world and medieval economies are dominated by terrestrial landscapes and creatures. Even recent works of medieval settlement and subsistence exclude some maritime industries, especially the use of whales, as a part of early medieval economies.³⁹ The coast and its bounty of resources too often goes unnoticed in many analyses of medieval economies, even though the oceans and the shore, then as today, served as “zones of attraction for human dispersal, population growth and social interaction.”⁴⁰ Some would argue that studies of marine or lacustrine environments are themselves flawed due to the predominant terrestrial paradigm that pervades historical scholarship. “Land-based models have often been used as a means of interpretation, attempting to recreate the past perception and use of the material world. Where the sea has been incorporated into schemes of interpretation it is sometimes seen as a ‘backdrop’ to land-based activities...”⁴¹

It is a given that the medieval seas were as intricate and meaningful as any terrestrial landscape, and as challenging, dangerous, and mysterious to premodern peoples as they can be to us today. “The sea need not have been something that was totally ‘other’, but a facet of the natural world with which people had an intimate relationship.”⁴² Today we recognize that the great oceans and seas are the most complicated and unknown of all realms upon the earth. Over seventy-percent of the globe is covered by oceans, yet we have explored only a fraction of that area. The deepest sea floors remain almost inaccessible, and with

³⁹ Even a reference to Flixborough, an Anglo-Saxon site notable for its extensive assemblage of cetacean bone, omitted discussion of whales and maritime resources in Hamerow’s recent settlement study of Early Medieval England. H. Hamerow, *Early Medieval Settlements: The Archaeology of Rural Communities in North-West Europe 400–900* (New York: Oxford University Press, 2002).

⁴⁰ Bailey and Milner cited in K. Lidén, et al., “‘The wet and the wild followed by the dry and the tame’—or did they occur at the same time? Diet in Mesolithic—Neolithic southern Sweden,” *Antiquity* 78 (2004): 31.

⁴¹ T. Phillips. “Seascapes and landscapes in Orkney and northern Scotland,” *World Archaeology* 35, no. 3 (2003): 371. While North Atlantic studies have long incorporated, by necessity and simple logic, maritime environments with the terrestrial, the same is not necessarily true in medieval studies more broadly. Studies which adopt a regional focus or studies which center on cultural regions, such as the Irish Sea, the North Atlantic, the Baltic, and so forth, are more naturally predisposed to a holistic or environmentally inclusive approach.

⁴² Phillips, 372.

each foray into the oceans, new species are discovered, many bizarre and phenomenal if not monstrous in appearance. This complexity and mystery of the sea was recognized by ancient peoples and particularly by mariners and authors. Ancient and medieval authors, from Pliny to Olaus Magnus, noted monstrous and mundane marine mammals, but also described their habitats. The seas were viewed in complex terms, both in the immense economic value of the sea as a highway and as a provider, and in the savage and hostile intent of the sea towards the land. The sea offered both opportunity and devastation to those who tested the waters. It was the ultimate resource for many medieval communities, with activity ranging from the simplest subsistence foraging to far-reaching trade and exploration.

But the sea was fickle in its relationship with medieval peoples, acting both as a giving provider of a vast array of flotsam and jetsam and a ready source of food for the taking, and as a voracious consumer, destroying and reclaiming all that it provided and more. To challenge the waters and to hunt or fish in an environment resolutely foreign to even the most experienced seaman must have been humbling and terrifying. Working on the sea requires different conceptual models, behaviors and disciplines than most jobs on land. The ability to stalk, capture and kill a great whale or a pod of whales with basic, non-mechanized equipment is a feat which demands acute senses, skills and intelligence.

...[B]ecause of the special behaviour of objects, aquatic environments represent a strange realm from the point of view of humans... [It] may be argued that fishing requires specific perceptual and cognitive skills. Since the prey moves in a different medium, the problem of orientation demands particular models. As fishermen are physically separated from fish, they must make descriptive models of an environment about which they can only obtain information by indirect observation.⁴³

The terrestrial environments of the Middle Ages posed demanding challenges to those who traveled or worked the land. We can only imagine the travails of medieval mariners.

During the Middle Ages, a force greater than nature acted upon this already mysterious realm. The waters, like the land, were God's province, where the humble and the haughty would face tests of faith from the sea itself, but especially from His most monstrous or

⁴³ G. Pálsson, "The idea of fish: land and sea in the Icelandic world-view," in *Signifying Animals*, ed. R. G. Willis, 119 (Boston: Unwin Hyman, 1990).

magnificent creatures. To travel upon the seas was not merely a test of nature's wrath, it was a test of one's own soul, which the waters and the creatures within could cleanse or capture. Countless stories from early Christendom through the Middle Ages clearly demonstrate this function of the seas, as the waters that tested the purity of a Christian's soul, from the journeys of St. Paul to the voyages of Crusaders.

While the sea was appreciated as a creator and destroyer of wealth and well-being, its creatures were of equal power. Jonah's trials in the belly of the whale most memorably demonstrated God's use of the sea and its creatures as a test of piety, but medieval audiences would have been equally familiar with numerous hagiographical accounts of saints as seafarers, including the lives of Sts. Godric and Columba and the voyage of Brendan. In many of these stories, the whale is the instrument not of God, but of the Devil.⁴⁴ Dicuil, an Irish scholar at Charlemagne's Aachen, repeated a description by Priscian on the whales and waters around Ceylon: "About [the shores of Asia] leap numerous whales as large as mountains, fed by the vast Red Sea. Over their backs and shoulders runs a terrible spine, bringing death and fate beneath their savage mouths. They are wont to suck down both ship and crew alike, for sea as well as land may bring destruction to those who deserve it."⁴⁵ But the waters were uniformly threatening, not simply foreign waters as described by Dicuil. The seas are represented throughout the Bible as a "restless force of chaos [which] becomes in the New Testament the force of evil.... In the early Middle Ages it would seem that the sea was identified with the realm of evil."⁴⁶

Whales, like other maritime marvels, were not just part of nature, they transcended it. Few authors distinguished between the monstrous and the mundane, as whales often were equated with supernatural creatures. According to Seneca, the sea was a breeding ground for monstrosities: "all that is primitive and incomplete in nature has retreated to this far refuge."⁴⁷ No ancient culture, pagan or Christian, was devoid of

⁴⁴ Images of whales in monstrous form are illustrated in R. Muir Wright, "The Rider on the Sea-Monster: Quid gloriaris in malitia," in *The north sea world in the Middle Ages: studies in the cultural history of north-western Europe*, eds. T. Liszka and L. Walker, Ills. 4.1, 4.3–4.5 (New York: Four Courts Press, 2001).

⁴⁵ Dicuil *Liber de Mensura Orbis Terrae*, ed. J. J. Tierney (Dublin: Dublin Institute for Advanced Studies, 1967), vii.31; 81–83.

⁴⁶ Wright, 78.

⁴⁷ Seneca *Suas*, 1.4, quoted in M. Beagon, *Roman Nature: The Thought of Pliny the Elder* (Oxford: Clarendon, 1992), 186.

some maritime creature that provoked fear and respect. Norse myth recounts the fearsome Midgardsormr, the World Serpent occupying the great ocean surrounding the Norse world. According to the *Prose Edda*, Midgardsormr would rise up at Ragnarok, the final battle of the gods and the end of this world, and “will spit so much poison that it will bespatter all the sky and sea...”⁴⁸ The god and hero Thor would die after his defeat of the terrifying sea serpent. Another Germanic classic, *Beowulf*, revels in heroic struggles versus sea monsters. The Danish hero, in his epic swimming contest with Breca, swam the ‘whale-road’ with sword in hand “a naked hard-proofed blade for protection/against the whale-beasts (*hron-fixas*).”⁴⁹ For Christian and pagan alike, the seas teemed with writhing monsters and whales whose sole purpose was the destruction of ships and consumption of their hapless crews. This is most dramatically illustrated in Olaus Magnus’ 1539 *Carta Marina*. Olaus’ map depicts Northern seas swarming with malicious creatures, identified in the map as *monstrum uisum* or ‘violent monsters,’ bearing spikes, fangs, and all manner of fearsome appendages (Fig. 3).⁵⁰ No less terrifying are these creatures in their comportment. A vast panoply of creatures across the Atlantic seeks out ships and sailors in this map for the thrill of havoc. Hapless sailors are seized from their foundering ships, shown clasped in the giant claws and maws of monstrous crustaceans and whales. Compared to the detail of the *Carta Marina*, Jonah was fortunate to have been swallowed whole (Fig. 4).

Within the oceans and seas, ancient and medieval men and women found whales to be conceptually complex and valuable creatures, friends or foes to mariners, tormentors in league with the Devil, or a simple bounty stranded upon the shore. Some individuals and authors were able to identify many different species or folk categories of whales, while others had only the sketchiest knowledge of any creature of the sea.⁵¹ The image of the whale as aggressor and monster is probably the most famous medieval description of this creature, but premodern

⁴⁸ S. Sturluson *Edda*, ed. and trans. A. Faulkes (London: J. M. Dent, 2003), 54.

⁴⁹ *Beowulf*, trans. S. Heaney (New York: W. W. Norton & Co., 2000), ll. 540–541; a common kenning for the sea in Old English was the “*hron-ræd*” or whale road.

⁵⁰ E. Lynam, *The Carta Marina of Olaus Magnus, Venice 1539 and Rome 1572* (Jenkinson: Tall Tree Library, 1949).

⁵¹ Whales, when not considered monstrous, could be classified with other large fish and marine mammals, such as large sharks, especially basking sharks, giant sea turtles, walrus and seals (George and Yapp, 1991). See also D. Hassig, *Medieval Bestiaries: Text, Image, Ideology* (New York: Cambridge University Press, 1995).

authors also recorded detailed portraits of whales that seem to indicate observation and familiarity. From the exacting zoological descriptions penned by Aristotle to the equally detailed folk categories described by the anonymous author of the thirteenth-century Norwegian *Kǫ́ng's Mirror*, it is apparent that many authors had a very clear idea of what whales really were. Some authors were observers, some were reporters. We must consider who encountered whales in the Middle Ages and how information on these creatures was transmitted.⁵²

Many people would have had the casual opportunity to observe whales, but fishermen and sailors, more than authors or archbishops, naturally would have had the greatest exposure to these creatures. Cetacean sightings from the coast must have been regular during the Middle Ages, when cetacean populations ten times greater than today dominated the seas. More whales also may have stranded in an age of larger whale populations. Individual whales or entire pods may follow along the coast or even swim in shallows when hunting seals or following shoals of herring or other fish. Young whales, in particular, venture close to shore and are known to readily approach boats. Medieval sources make it clear that whales of all kinds were encountered in their natural environment at sea, in coastal shallows, and stranded along the shore.

All of these forms of exposure to cetaceans contributed to perceptions of what whales were, but observation of whale behavior also allowed fishermen to consider suitable strategies for acquiring cetaceans. Proximity to and scrutiny of whales informed sailors not only of the movement of schools of fish, upon which some whales would feed, but also about the nature of different cetacean species. As one Icelandic source informs us, rorquals were readily approachable, considered friends to fishermen, while other whales, such as Sperm whales, were considered malicious and dangerous, even eager to sink fishing vessels.⁵³ Scandinavian sources record many categories of whales, with twenty-one folk categories of whales described in the *Kǫ́ng's Mirror*. Some individuals within Norse

⁵² Friedman argues that direct observation reported by Albertus Magnus was merely a topos common to medieval authors, and that Albert's "observations" were actually recycled reports from earlier authors. J. Friedman, "Albert the Great's topoi of direct observation and his debt to Thomas of Cantimpré," in *Pre-modern Encyclopaedic Texts*, ed. Peter Binkley, 380–381 (New York: Brill, 1997).

⁵³ *The Kǫ́ng's Mirror*, trans. L. M. Larson (New York: Twayne Publishers, Inc. and the American-Scandinavian Foundation, 1917), XII; *Könungs Skuggsjá*, ed. L. Holm-Olsen (Oslo: Universitetsforlaget, 1970).

society knew whales well enough to identify species at a glance.⁵⁴ This knowledge allowed fishermen to determine which whales were good prey and thus observant fishermen could become whalers.

The two categories of whales of the medieval seas, the monstrous and the mundane, were not seen as incompatible. The same whales that were resources could also have a touch of the monstrous, simultaneously creatures to fear and desire. As was common within European Christian traditions, the Norse associated whales with the biblical Leviathan and the monster of Jonah, as well as the whales seen in common saints' lives, the *Physiologus*, and bestiaries. As late as the sixteenth century, the conflation of whale and sea monster remained common. Archbishop Olaus Magnus of Uppsala (1490–1557), in his *Historia de Gentibus Septentrionalibus*, or *History of the Northern Peoples*, described the whales of the northern seas as serpents and monsters, violent creatures who attacked boats and men: "Off the coasts or out in the Norwegian sea are found monster fish with strange names (though they are reckoned to be species of whale)... They say that you can view whales, not off the beaches or the coasts, but out in the Atlantic deeps, where the sight of them dissuades mariners from their bold voyages in those latitudes and, though terror of meeting their end, from presuming to penetrate the secrets of the elements."⁵⁵ Despite their innate monstrosity, Olaus devoted numerous chapters to the practical utility of whales, even the most monstrous creatures. His work underscores the longevity and complexity of early traditions of marine terrors and monstrous whales.

Many authors of antiquity and the Middle Ages, like Olaus Magnus, attempted to record precise details about whale appearance and behavior. The quality and amount of detail provided seems to depend in large part on the culture and experience of each author. Northern authors provided varying insights on whale behavior and had well-defined distinctions between different categories of whales. Some Mediterranean authors, in contrast, were mystified or frightened by the great whales they observed in their travels and offer little real description of the animals apart from their terrifying behavior. These classical accounts of whale behavior, penned by authors who previously had not seen large

⁵⁴ *Vinland Sagas: Grænlandinga Saga and Eirík's Saga*, ed. M. Magnusson and H. Pálsson (New York: Penguin, 1965), 96; *Eirík's Saga*, viii.

⁵⁵ Olaus Magnus *Historia de Gentibus Septentrionalibus*, ed. P. Foote (London: Hakluyt Society, 1998), XXI, 5, 41; p. 1086, 1127.

whales, provided the basic information on cetaceans that was used and abused by later authors for centuries.

Whales, like the medieval seas themselves, were simultaneously familiar and foreign. This complexity in perception makes whales conceptually challenging within our understanding of the medieval world. They existed on the boundary of monstrous and mundane, a menace to man at sea, but also problematic upon the shore as the subject of human dramas and conflicts over shared driftage rights. Liminal, complicated, and inherently valuable, their complex status in the medieval mind is reflected in the complex portrait they have left in the textual and material record.

CHAPTER TWO



WHALES AND WHALING FROM CLASSICAL ANTIQUITY TO THE MIDDLE AGES

The *King's Mirror* tells the story of the monstrous whales of the Icelandic seas. Among the worst of these creatures was the Humpback, disposed to sporting with and striking ships, upturning those unfortunate vessels that sailed across its back as it lay in wait. Such a monstrous whale is an appropriate beginning to a survey of medieval whaling literature. Fantastic and diabolical whales, like the Humpback or the 'spouter' (Fig. 5) from Olaus Magnus' *Historia*, served as archetypes shared and perpetuated by nearly all medieval people, both pagan and Christian. As shall be shown in later chapters, North Atlantic authors frequently reproduced in their works these pan-European descriptions of archetypal whales, while adding their own folk species to the panoply of outrageous cetaceans in the northern seas. But one cannot understand northern perceptions of whales without contextualizing those portraits within classical and medieval (mis)perceptions of whales. This chapter sets forth a selection of major sources on whales of the ancient world and medieval Europe, texts which provided models for later northern interpretations of marine mammals. The chapter also looks to some of the earliest practical accounts of whale use in Western Europe, from Anglo-Saxon whalers to the natural history of Albertus Magnus.¹

¹ The texts presented in this chapter are, as stated, a selection of major works, and not a comprehensive catalog of all medieval whaling references.

Misconceptions of the whale as a beast of the deep were partially based on ignorance about marine mammals. As seen in chapter one, the complexity of ancient and medieval views of nature, in both number and diversity, disallows simple definition. Aleksander Pluskowski's recent study *Wolves and the Wilderness in the Middle Ages* succinctly articulates this point and problem:

...[Popular] understandings of relations between humans, wolves and wilderness in the Middle Ages are based on an impression of intense negativity, fear and insecurity ultimately driven and encouraged by Christianity. But as medieval Christianity is increasingly recognized as a complex and diverse paradigm, so too must human responses to the natural world. Detailed studies of some of these responses have demonstrated their plasticity and diversity—changing over time and varying from one region or country to another—whilst the few bold attempts to present a cohesive narrative of human appropriations of animals in the Middle Ages have revealed as much inconsistency as integrity.²

Like the wolf, whales could evoke fear and fascination and they had done so from antiquity. Medieval stories of monstrous whales were derived not only from classical texts, but from early portraits of fearsome sea creatures of biblical literature. The books of Job, Jonah, Psalms and Revelations all informed medieval audiences of the awesome creatures of God's seas. Pan-European traditions of the *Physiologus* likewise perpetuated notions of whales as dangerous to humanity, particularly to sinners on the seas. Saints' lives and bestiaries, alongside other works of spiritual and moral edification, built upon biblical and classical tradition in their depictions of whales and other monstrous creatures that threatened or challenged the faithful. Bestiaries were perhaps the most prolific of all sources, gaining the widest audience and informing the firmly land-locked of the horrors of the seas. Christian authors produced the most widely-known portraits of medieval whales, as fierce and greedy consumers of the sea. Many of these traditions began in the classical corpus, which included both natural history and outright mythology.

Transmission of ancient knowledge from Greece to Rome to medieval Europe, as briefly discussed in chapter one, occurred at several social levels, from the highest literate elites to the oral culture of the

² A. Pluskowski, *Wolves and the Wilderness in the Middle Ages* (Rochester, NY: The Boydell Press, 2006), 2.

peasantry. Of popular culture, local tradition and oral folklore, we have limited knowledge, but in the works of encyclopedists, philosophers and moralists, traditions of antiquity are clear. Vast collections of animal stories from handbooks, encyclopedias and natural histories, found in the libraries of late antiquity, were read, borrowed, emended and improved upon.³ “Clearly there was a common stock of [animal stories] in the later antique world and the various authors borrowed freely from each other. The volume of them, clear in the large works of Aelian and Athenaeus, is evidence of the ready availability of libraries to those who lived in major cities. . . . They could select from a wide range of material and add to a growing market for handbooks and anthologies.”⁴ The works of some authors rose and fell in favor from the Hellenistic world to the Middle Ages. Aristotle and Pliny were the two most popular sources for Hellenistic and medieval lore, respectively. We can begin to see as early as the works of Pliny the process of change and transformation in transmission of animal tales as Greek traditions became Latin. “It is a striking fact that it was some of the simplest and everyday things, like animals and plants, that did not survive the passage from one culture to another. When Pliny was discussing fish often he did not know what his Greek sources were writing about. Many Greek names of fish did not have accepted counterparts in Latin, and when Pliny invents one, it is often enough unintelligible to us.”⁵ On a practical level, tracing the transmission of these stories from one author to the next requires a keen knowledge of the traditions of classical and late antiquity as well as the Middle Ages. The *Physiologus* is a good example of the complexity of transmission: “It was written in Greek, in the middle of the second century, and so is actually a little earlier than Aelian. It is also earlier than Origen, who quotes it. It draws on the same stock of animal-lore as does Aelian. It became very popular and was soon translated into Latin; during the Middle Ages it was translated into many vernaculars from Icelandic to Syriac and exists in a large number of manuscripts. It was a major source for the medieval bestiary.”⁶ Along these convoluted paths of

³ R. French, *Ancient Natural History: Histories of Nature* (New York: Routledge, 1994), 289.

⁴ French, 299.

⁵ French, 303.

⁶ French, 277.

transmission and within this wide array of stories, whale legends were passed from antiquity to Christian Europe.



Some of the earliest references to human encounters with whales were produced by ancient Greek and Roman authors, who wrote extensively about whale appearance, behavior, utility and interactions with both humans and other marine creatures. Greek authors most commonly used the word *ketos* indiscriminately for all whales and sea creatures. “The word is found in Greek literature as early as Homer, and normally refers to any sea monster or huge fish.”⁷ *Ketos* is used in a passage describing Scylla and in reference to “the sea monster to which Andromeda was exposed,” but also “to refer generally to any large creature of the sea... [including] a variety of whales,... a number of large fish....different types of sharks, dogfish, and rays,...ells, turtles and seals.”⁸ While maddeningly vague to modern readers, “the Homeric kete, sounded more dangerous for not having specific names; they were nameless monsters....”⁹ With the advent of natural philosophy, Aristotle articulated distinctions between *kete* and *phallaina*, thus the origins of the most common Latin terms for whales, *cetus* and *balaena*.¹⁰ Roman authors also used specific names, *physeter* and *orca*, to describe particular, often foreign, whales.¹¹

One of the earliest accounts of whale behavior comes from Greek geographer Strabo of Amasya (ca. 64 BC–AD 24). Strabo focused on the value of whales in local economies as well as whale behaviors at sea. In his account of the Iberian region of Turdetania, Strabo discusses local maritime industries, focusing especially on descriptions of the fascinating creatures of the sea. The productive sea that yielded mussels, oysters, purple-fish and tunny-fish by the thousands also was home to “narwhals, ‘phalaenae’ [balaenae], and spouting-whales; when

⁷ J. K. Papadopoulos and D. Ruscillo, “A Ketos in Early Athens: An Archaeology of Whales and Sea Monsters in the Greek World,” *American Journal of Archaeology* 106 (2002): 207.

⁸ Papadopoulos and Ruscillo, 207–208.

⁹ Papadopoulos and Ruscillo, 208.

¹⁰ Papadopoulos and Ruscillo, 210.

¹¹ J. M. C. Toynbee, *Animals in Roman Life and Art* (Ithaca, NY: Cornell University Press, 1973), 208.

these spout, the distant observer seems to see a cloud-like pillar.”¹² This pillar, a threatening massive flume, the exhalation of the great whales, would become one of the signatures associated with monstrous whales in general, described later by Pliny, Arrian, Dicuill, and others.¹³ Strabo also provided an account of the voyage of Alexander the Great’s general Nearchus and his encounters with powerful whales, an episode elaborated upon by both Arrian and Pliny. Arrian (c. AD 96–180) wrote the lengthiest account of the voyage of Nearchus, during his return to Babylon via the Indian Ocean and Persian Gulf in 326 BC. While Alexander and his men faced the horrors of Gedrosia, Nearchus’ fleet was threatened by the terrifying monsters of the Indian Ocean, including spouters like those mentioned by Strabo.

In this foreign sea there lived great whales and other large fish, much bigger than ours in the Mediterranean.... As we set sail we observed that in the sea to the east of us water was blown aloft, as happens with a strong whirlwind. We were terrified and asked our pilots what it was and whence it came. They replied that it was caused by whales, which inhabit this sea. Our sailors were so horrified that the oars fell from their hands... Then I walked round the fleet and ordered every steersman I met to steer straight at the whales, exactly as if they were going into a naval battle. All the men were to row as hard with as much noise as possible, including yells... The whales, which could be seen just in front of the ships, dived terrified into the depths. Not long after that, they surfaced behind the fleet, blowing water into the air as before....¹⁴

Arrian’s report, while seemingly fantastic, could recount realistic whale behaviors as recorded and repeated by one who had never witnessed great whales. Arrian, like Strabo before him, reported that whales blew water aloft as a whirlwind, an account that could describe the flume created by breaching whales, or merely from exhalations of a sizable pod of large whales. Strabo also notes of Nearchus’ voyage: “...what disturbed [the sailors] most was the spouting whales, which, by the spoutings, would emit such massive streams of water and mist all at

¹² Strabo *The Geography*, trans. H. L. Jones (Cambridge, MA: Harvard University Press, 1966), 3.2.7.

¹³ Dicuill, in repeating Solinus, also describes whales of the Indian Ocean, “beyond four acres in length, which they call ‘blowers,’ which raise their immense size, higher than tall columns, above the sail-yards of ships, and sucking up the waves with their blow-holes they so spew them forth that they often sink the ships of voyagers with the stormy spray.” Dicuill *Liber de Mensura Orbis Terrae*, ed. J. J. Tierney (Dublin: Dublin Institute for Advanced Studies, 1967), vii.25; 79.

¹⁴ R. Ellis, *Men and Whales* (New York: Alfred A. Knopf Inc., 1991b), 33.

once that the sailors could not see a thing that lay before them.”¹⁵ The behaviors of pods of great whales must have seemed threatening to these sailors who may not have encountered many great whales in the Mediterranean: “Large whales live in the outer ocean, and fishes much larger than those in our inland sea.”¹⁶ Papadopoulos and Ruscillo’s compelling survey of Greek whaling lore notes that “it is clear that whales were not systematically exploited in Aegean prehistory and in classical antiquity.”¹⁷ Nearchus and his fleet were probably unable to interpret typical whale behaviors that would have seemed common to northern sailors more accustomed to such encounters.

Another significant detail surrounds the actions taken by the men in charging the whales. Arrian reports that the whales dived in terror and avoided the ship, but resurfaced quickly again near the fleet. Nearchus may have considered this charge to be an act of aggression, although the whales may have followed the ships out of simple curiosity. Nearchus, though, had reason to fear. Depending upon the species of whale encountered, the act could have been an aggressive one. An account from 1820 in the diary of Nantucket first-mate Owen Chase, of the whaleship *Essex*, reveals the horrors of a violent encounter in the Pacific with a wounded Sperm whale. Chase’s story became the essential material behind American literature’s most famous maritime epic, *Moby Dick*:

I turned around and saw him, about one hundred rods directly ahead of us, coming down apparently with twice his ordinary speed and, it appeared to me at that moment, with tenfold fury and vengeance in his aspect. The surf flew in all directions about him, and his course towards us was marked by white foam a rod in width, which he made with the continual violent thrashing of his tail. His head about half out of the water, and in that way he came upon and again struck the ship.¹⁸

Nearchus’ fleet, it seems, could have witnessed the frothing seas and the whirlwind of spray caused by the rushing whales, yet Arrian’s

¹⁵ Strabo, 15.2.12.

¹⁶ Arrian *Anabasis Alexandri (Books V–VII)*, *Indica (Book VIII)*, trans. E. I. Robson (Cambridge: Harvard University Press, 1978), *Indica*, VIII, 29. 13–30, p. 395.

¹⁷ Papadopoulos and Ruscillo, 200. They note, too, that the species found in the Mediterranean include a host of dolphin species, some beaked whales and baleen whales. The largest species are less common, namely sperm whales, with an occasional sighting of blue or humpback whales.

¹⁸ Owen Chase, *The Wreck of the Whaleship Essex* (New York: Harcourt Brace and Co., 1999), 12.

account does not record the same perception of imminent danger as seen in the terrifying case of Owen Chase. Pliny reported further on the great whale charge of Nearchus' fleet:

...the fleet of Alexander the Great deployed its column in line of battle to encounter [the whales], in the same way as if an enemy force were meeting it: it was not possible to escape them in any other manner. They are not scared by shouts or noises or uproar, but only by impact, and they are only routed by a violent collision.¹⁹

It is speculated that these whales encountered by Nearchus may have been Sperm whales, the same species that set upon The Essex. Sperm whales can be easily startled and may react in what could be perceived as a violent fashion.²⁰ Strabo observed that travelers to India "speak of the size of these creatures and of their manner of appearance, but do not speak of them either as appearing in large groups or as often making attacks..."²¹ If these whales weren't attacking the ships, they were simply spy-hopping, playing and breaching the water.

The spectacular breaching of Sperm whales, which are known to jump almost entirely out of the water, seems to fit Nearchus' description of the water displacement created by the whales. Certainly a pod of rorquals or Sperm whales, aggressive or excitable when alarmed, would cause a measure of concern to Nearchus and the fleet. In an examination of nineteenth century Shetland whaling, Reverend A. Sandison states that certain rorquals will breach and jump clear of the sea for extended distances, and that fishermen must make for shore and avoid large whales during these breaching fits, for they will even pursue and attack boats.²² Thus, regardless of species and for any number of reasons, large whales may pose a real threat to sailors and

¹⁹ Pliny *Natural History*, trans. W. H. S. Jones (Cambridge, MA: Harvard University Press, 1963), Book IX, ii, 5: "...ut Magni Alexandri classis haut alio modo quam hostium acie obvia contrarium agmen adversa fronte direxerit: aliter [sparsis] non erat evadere. non voce, non sonitu non fragore sed ictu terrentur, nec nisi ruina turbantur.

²⁰ M. Carwadine, *Whales, Dolphins and Porpoises* (New York: DK Publishing, Inc., 1995), 86–89. When three Japanese fishermen recently tried to rescue a stranded sperm whale in a bay off Shikoku Island, "the panicked creature turned on them and struck the vessel." One of the fishermen was tossed from the struck boat and drowned.

"Whale kills would-be rescuer in Japan," Reuters Ltd., <http://www.msnbc.msn.com/id/17592827/> (accessed 13 March 2007).

²¹ Strabo, 15.13.

²² A. Sandison, "Whale hunting in the Shetlands," *Saga-Book of the Viking Club* 1 (1916): 43.

fishermen. To those who are unfamiliar with them, the most docile of whales could seem threatening in their mere visage if not behavior.

Pliny the Elder, writing in the late first century AD, recorded some of the most impressive classical descriptions of whales in his work *Natural History*. One of Pliny's goals in the *Natural History* was to record catalogs of animals in the known world, a task he found more easily accomplished in marine than terrestrial contexts: "Surely it will be agreed that not all the species can be brought under one general view for our consideration. On the other hand, upon my solemn word, in the sea, vast though it is, and in the ocean, the number of animals produced is known; and—we may well wonder at this—we are better acquainted with the things which nature has sunk down in the deep."²³ Pliny enumerates the plants and animals of the vast seas at 144 species, including sea-trees, blower-whales, Nereids, whalebone whales, sea-men, and grampuses, alongside more commonly known species.²⁴ In addition to catalogs of maritime and aquatic life, Pliny offered detailed accounts of the behavior of marine creatures, particularly the Killer whale, or the grampus.

...the Killer Whale, [is] a creature that is the enemy of the other species and the appearance of which can be represented by no other description except that of an enormous mass of flesh with savage teeth. The killer whales burst into [the retreats of other whales] and bite and mangle their calves or the females that have calved or are still in calf, and charge and pierce them like warships ramming. The whales being sluggish in bending and slow in retaliating, and burdened by their weight, and at this season also heavy with young or weakened by travail in giving birth, know only one refuge, to retreat to the deep sea and defend their safety by means of the ocean. Against this the killer whales use every effort to confront them and get in their way, and to slaughter them when cooped up in narrow straights or drive them into shallows and make them dash themselves upon rocks. To spectators these battles look as if the sea were raging against itself, as no winds are blowing in the gulf, but there are waves caused by the whales blowing and thrashing that are larger than those aroused by any whirlwinds.²⁵

The reader must be wary, of course, when confronting descriptions of the whale's malicious behavior as perceived by Pliny in his account of the witnessed events. The Killer whale is depicted as the truest of

²³ Pliny, XXXII, liii, 143.

²⁴ Pliny, XXXII, liii, 144–154.

²⁵ Pliny, IX, v.

marine monsters, described with savage (*truculentae*) teeth and creating waves greater than those seen in nature. In Pliny's account, the whale is likened to a Roman machine of battle, executing a strategy of confrontation against a retreating foe. To his credit as a natural historian, Pliny's descriptions resonate with modern scientific observations of Killer whale hunting strategies and behavior.²⁶

Pliny also described the clash between a powerful Killer whale and an even more powerful, albeit much maligned, emperor Claudius.

A killer whale was actually seen in the harbour of Ostia in battle with the Emperor Claudius; ... while it was pursuing its food which was driven forward to the shore by the waves, its back projected far above the water like a capsized boat. Caesar gave orders for a barrier of nets to be stretched between the mouths of the harbour and setting out in person with the praetorian cohorts afforded a show to the Roman public, the soldiery hurling lances from the vessels against the creatures when they leapt up alongside, and we saw one of the boats sunk from being filled with water owing to a beast's snorting.²⁷

Killer whales are known to beach themselves in the pursuit of seals, much as Pliny describes. Claudius' call for a blockade, a "barrier of nets" to defeat the whale is resonant of a common traditional whaling strategy, in which the whale is trapped and more easily shot in a fjord, bay or inlet.²⁸ Claudius himself seems more a spectator than actor, but his capture and defeat of the whale, via the praetorian, demonstrated the Roman penchant for expressing dominance over nature, in all its toothsome forms.²⁹

²⁶ Scientists have recently witnessed spectacular events in which Killer whales have attacked large sharks or other whales. In one case, a female Killer whale attacked and killed a large Great white shark, from which her baby then fed. In another case, a pod of Killer whales ravaged a pod of Sperm whales. Such behaviors have been rarely witnessed in the past and they substantiate ancient reports of the determined attacks of Killer whales; R. L. Pitman and S. J. Chivers, "Terror in Black and White," *Natural History* 107, no. 10 (Dec. 1998-Jan. 1999): 26-29.

²⁷ Pliny, IX, v, 14-15.

²⁸ ...*pretendi iussit Caesar plagas multiplices inter ora portus*... Pliny, IX, v, 14-15.

²⁹ Pliny, IX, v, 14-15. This Roman account of sea battles against Killer whales in the Mediterranean is not without precedent. An Assyrian inscription from the reign of Tiglath-Pileser I (1114-1076 BC) recounts a hunting expedition by the king along the Phoenician coast: "I made a basalt replica of a *nahiru*, which one calls horse of the sea, which I killed in the sea of Amurru with a harpoon,..." P. Wapnish, "Towards Establishing a Conceptual Basis for Animal Categories in Archaeology," in *Methods in the Mediterranean: Historical and Archaeological Views on Texts and Archaeology*, ed. D. B. Small, 252 (New York: E. J. Brill, 1995). The *nahiru*, whose teeth were described in a later inscription as valuable tribute, is thought to be a toothed whale, and possibly a

Claudius was not the only emperor to pursue whales. Justinian sought the fierce whale called Porphyrios, who “annoyed the city of Constantinople and neighbouring towns for fifty years.”³⁰ He not only annoyed the Byzantines, but disrupted sea traffic, sank boats, and drove many ships off course.³¹ The ravages of Porphyrios were only few of the many disasters befalling Justinian’s empire, as earthquakes, floods and famine had caused ruination, on top of the intermittent appearance of Porphyrios. Procopius presumably took some glee in Justinian’s futile attempts to capture the rogue whale: “It had consequently become a matter of concern to the Emperor Justinian to capture this creature, but he was unable by any device to accomplish his purpose.”³² The end of this great adversary was not the Emperor’s accomplishment, but his people’s. Porphyrios, greedy to pursue dolphins and “impelled by hunger or by a contentious spirit,” beached himself and sank deep into the mud.

Now when this was reported among all the people who dwelt round about, they straightway rushed upon the whale, as though they hacked at it most persistently with axes on all sides, even so they did not kill it, but they dragged it up with some heavy ropes. And they placed it on waggons and found its length to be about thirty cubits, and its breadth tent. Then, after forming several groups and dividing it accordingly, some ate the flesh immediately, while others decided to cure the portion which fell to them.³³

Procopius concludes this account by noting that some questioned whether this was in fact the same whale that had terrorized the Byzantines or another common whale. Porphyrios seems to have been granted the same preternatural powers as other monstrous whales, greater than the Emperor and perhaps able to avoid capture entirely.

Not all Roman descriptions of whales focused on the fearsome. Observation and description of whales of a rather different nature

Killer whale (Wapnish, 253, 269). The Killer whale appears to have been thought of as the most worthy adversary in the seas by royalty of the ancient world, and was an animal worthy of a royal hunt.

³⁰ J. M. C. Toynbee, *Animals in Roman Life and Art* (Ithaca, New York: Cornell University Press, 1973), 208.

³¹ Procopius *History of the Wars*, Vol. VII, trans. H. B. Dewing (Cambridge, MA: Harvard University Press, 1962), xxix. 9–16.

³² Procopius, VII. xxix. 9–16.

³³ Procopius, VII. xxix. 9–16; editor Dewing notes that the dimensions of Porphyrios were approximately 45 by 15 feet.

is found in Juvenal's Satire X. Juvenal describes, in a brief allusion, *Ballaena brittanica*, the 'British whale.' This whale is not given frightful attributes like the monstrous whales of Pliny and Arrian. In this text on man's rash attempts to gain glory and wealth, Juvenal writes: "But more [men] are strangled by the capital they amass with such expense of spirit, those bloated fortunes that dwarf any normal inheritance till they look like some puny dolphin beside a British whale."³⁴ In his survey of medieval whaling in the English Channel and the North Sea, De Smet observed that this 'British whale' must have been well known by Roman residents of Britain and seen from the coast in order for the reference to be understood by Juvenal's Roman audience. De Smet also states that this whale, by virtue of being described as a 'British whale,' is seen as different from those whales of the Mediterranean.³⁵ Juvenal could be describing any species, but this may be a reference to one of the Arctic whales, such as the Bowhead or Right whale, species unlikely to travel as far south as the Mediterranean. Finally, Juvenal refers to the British whale, oversized or grandiose, as a bloated fortune compared to the 'puny dolphin.' The stranded whale itself literally could have been a bloated fortune, a pun on the condition of a stranded, decomposing whale.

To the classical mind, whales embodied both fascinating and fearsome aspects of nature. They were perceived as aggressive creatures of the deep, prone to violent attacks on both humans and fellow marine animals. While familiar with dolphins and porpoises, larger whales seemingly were less well known to most Romans.³⁶ Perhaps this is why Juvenal bothered to reference the unique and massive British whale, which seems to have gained attention outside of Roman Britain. The large whales encountered by Mediterranean travelers proved frightening and unpredictable next to the gregarious dolphin and porpoise species which were so abundant in *Mare Nostrum*.

³⁴ Juvenal *The Sixteen Satires*, trans. P. Green (New York: Penguin, 1967), X, xiv, 205.

³⁵ W. M. A. De Smet, "Evidence of Whaling in the North Sea and English Channel During the Middle Ages," in *Mammals in the Seas*, Food and Agriculture Organization of the United Nations, FAO Fisheries Series No. 5, Vol. III, 303 (Rome: FAO Advisory Committee on Marine Resources Research Working Party on Marine Mammals, 1981).

³⁶ Toynebee says that "no renderings of whales, so far as the present writer is aware, are known in Roman art" (208), although depictions of dolphins are common in other Mediterranean traditions, most notably Minoan art.

At the same time, the Romans were fascinated by the remains of what they saw to be enormous monsters and monstrous fish (Fig. 6). The reports of massive whale bone architecture of Indian Ocean tribes and vicious whales at sea are clearly tales of wonder, but physical proof existed for the reality of these creatures. The bones of one monstrous sea creature “were brought by Marcus Scaurus from Jippa in Judaea during his aedileship and shown at Rome among the rest of the amazing items displayed. The monster was over 40 feet long, and the height of its ribs was greater than that of Indian elephants, while its spine was 1 ½ feet thick.”³⁷ Cassius Dio reported that “in the reign of Septimius Severus a huge whale...was washed up on the shore in the Porti Augusti near the Tiber mouth. A model was made of it for display at a wild beast show and fifty bears were driven into it.”³⁸ According to Suetonius, the otherwise moderate Augustus adorned his home with “things which were curious either for their antiquity or for rarity; such as, at Capri, the huge limbs of sea-monsters and wild beasts, which some affect to call the bones of giants...”³⁹ These giant bones reinforced Roman mythology of the ages of man and the creatures of the primeval universe as well as the mystery of great whales in the seas.⁴⁰



The authors of Christian late antiquity sought to describe the world around them with a very different purpose than did the Romans. Observation was no longer as significant as penetration and revelation. The natural world was a symbolic one which could illuminate God's will, while also revealing the inherent deficiencies of humankind. The sources of biblical antiquity coupled with those of classical antiquity provided material for a new type of text, the *Physiologus* and its later incarnation, the bestiary. These sources presented a new view of the

³⁷ Pliny, 129. IX.xi.

³⁸ Toynbee, 208.

³⁹ Suetonius “Life of Augustus,” in *The Twelve Caesars*, trans. R. Graves (New York: Penguin Books, 1989), 72.

⁴⁰ A. Mayor, *The First Fossil Hunters: Paleontology in Greek and Roman Times* (Princeton: Princeton University Press, 2000).

natural world, beyond the observations of classical authors into the deeper significance of nature's most fearsome maritime beasts.

Starting with the creation of swarms of living things in the waters and the great sea monsters of Genesis 1:21, the Old Testament reveals a host of marine monster narratives. The most famous marine creatures of the Bible are its Old Testament monsters, namely the Leviathan of Job and the great fish of Jonah. The New Testament likewise offers up a specter of marine terrors in Revelations 13.1 and the seven-headed beast which rose from the sea.⁴¹ While none of these creatures is necessarily thought to depict a real animal or observation of the natural world, the influence of these such monstrous creatures on the medieval imagination was devastating. The monstrous Leviathan, by which God humbled haughty Job, is a sea monster to best all sea monsters: "Can you draw out Leviathan with a fishhook, or press down its tongue with a cord? Can you put a rope in its nose, or pierce its jaw with a hook? . . . Can you fill its skin with harpoons, or its head with fishing spears? Lay hands on it; think of the battle; you will not do it again! Any hope of capturing it will be disappointed; were not even the gods overwhelmed at the sight of it?"⁴² Likewise, Jonah is humbled before God and learns of the Lord's favor while in the belly of the 'large fish,' commonly equated with a whale.⁴³ St. Ambrose comments in his *Hexameron* that the whale was in fact a giver of life to Jonah, putting a positive spin on this ominous story: "How shall I adequately speak of Jonas, whom the whale swallowed to grant him life and to return him to his activity as a prophet? . . . He who grieved when on land began to sing psalms in the belly of the whale. . . . The sea furnishes a more significant example of piety, since a fish gave welcome to him whom men had repelled and has preserved, in the person of Jonas, Him whom men have crucified."⁴⁴

The biblical story in the Old Testament Book of Jonah is one of the most famous whale encounters in western literature. While this brief story tells us very little about the *piscis grandis* sent by God to swallow Jonah, this story along with the description of the Leviathan,

⁴¹ *The New Oxford Annotated Bible: NRSV*, eds. B. Metzger and R. Murphy (New York: Oxford University Press, 1989), Revelations 13.1.

⁴² *New Oxford Annotated Bible*; Job, 41:1–2; 7–9; also Psalm 104:25–26.

⁴³ *New Oxford Annotated Bible*; Jonah, 1:17.

⁴⁴ St. Ambrose, *Hexameron, Paradise, and Cain and Abel*, trans. John J. Savage (New York: Fathers of the Church, 1961), *Hexameron* IV:35; pp. 189–190.

the crocodile or sea monster in the Book of Job, provided fuel for medieval imaginings of the sorts of creatures lurking in the oceans ready to challenge those who challenged God's will. "On the strength of Jonah's own words (Jon. 2.2), the whale and Leviathan, which were identified with each other, were both felt to represent the Devil or Hell. By extension, the mouth of the whale signified the entrance to Hell."⁴⁵ The ubiquity of Jonah iconography is further testament to the popularity of and fascination with this tale. Many early Christian sarcophagi feature the Jonah theme, alongside other maritime iconography.⁴⁶ In these sculptural representations of the Jonah episode, the depiction of the whale is frequently more akin to a sea monster, "with his dragon-like head, long upright ears and tail that curls like an eel's."⁴⁷ Rosemary Muir Wright describes illuminations of biblical sea monsters as reflections of fears of maritime powers:

[This] symbol may have a more specific meaning which relates to the sea, to the powers of darkness conjured up by the untamed ocean and which would be particularly appropriate to those whose home base lay in the lands skirting the North Sea and the Channel. If this beast head, for example, were to be identified as a sea dragon then the explanation of its ubiquitous presence in Northern imagery might find fruitful beginnings in the specific locations and needs of sea-going or sea-bound people.⁴⁸

Wright's analysis does not directly associate this sea monster with whales, nor should it, but they too were frequently affiliated with evil forces.

The great engulfing fish, most famous in Jonah's biblical narrative, also was found in the classical tradition, although in what may be a mockery of the spiritual reform of Jonah's experience. In its most

⁴⁵ J. Ziolkowski, "Folklore and Learned Lore in Letaldus' Whale Poem," *Viator* 15 (1984): 112.

⁴⁶ M. Lawrence, "Ships, Monsters and Jonah," *American Journal of Archaeology* 66, no. 3 (July 1962): 289–296.

⁴⁷ Lawrence, 294. Lawrence further notes the classical traditions of depicting whales and sea monsters in Greek vase painting and Roman mosaics. The sea monster, rather than more naturalistic depictions of whales, dominates the iconography.

⁴⁸ R. Muir Wright, "The Rider on the Sea Monster. 'Quid gloriaris in malitia...'," in *The North Sea World in the Middle Ages: Studies in the Cultural History of North-Western Europe*, eds. T. Liszka and L. E. M. Walker, 70 (Edinburgh: Four Courts Press, 2001). One of Wright's most compelling points is found in her conclusion, where she suggests that the sea monsters, Leviathan and Antichrist were perhaps more representative of a human threat, "contemporary fears of the sea-borne raiders from across the North Sea" (87).

outrageous incarnation, the Syrio-Roman author Lucian (AD 115–200), in his adventure story *True History*, recounted the greatest of all voracious whales. This whale, though, offered no real moral lesson, but merely adventure:

...at dawn on the third [day] we suddenly saw a school of whales approaching from the East. The largest was about a hundred and seventy miles long, and he started coming towards us with his mouth open, churning up the water for miles around into a great cloud of foam, and baring his teeth, which were considerably taller than the biggest phallus you ever saw in your life, as sharp as needles and as white as ivory.... The next moment he had gobbled us up, ship and all; but he never got a chance of chewing us, for the ship slipped through one of the gaps between his teeth and sailed straight into his stomach.⁴⁹

Inside the whale, piles of ships, sea creatures, anchors, cargoes and a vast tract of land, twenty-seven miles in circumference, were found. Lucian, the mariner of *True History*, along with his crew, explored this new land, complete with temples, cemeteries and a resident population who engaged in frequent warfare. This *terra incognita*, or *terra cetacea*, even boasted its own Plinian races:

an uglier pack of brutes you never saw. The Western, that's to say the tail-end, part of the forest is inhabited by people who look like kippers, except that they have eyes like eels and faces like lobsters. They live on raw meat and are very aggressive. Over toward the right wall of the stomach is a colony of mermen—I don't know what else to call them, for above the waist they're ordinary human beings, and below it they're just plain lizards.... On the left are some people with claws instead of hands, and some friends of theirs who have heads like tunny-fish. The area in the middle is occupied by crab-like creatures with feet like turbot, who can run very fast and are extremely quarrelsome.... Well, that's what the neighbors are like, and the problem is, how can one maintain a reasonable standard of life in such conditions?⁵⁰

The unlucky crew lived a life of relative luxury within the whale for nearly two years “playing games, or hunting, or cultivating vines, or picking fruit off the trees,” until the mariner-narrator became bored and planned an exit strategy.⁵¹ Lucian's text is an interesting complement to the Christian corpus of cetacean narratives, for it seems to be a send-up

⁴⁹ Lucian *True History and Lucius or the Ass*, trans. P. Turner (Bloomington: Indiana University Press, 1974), 26.

⁵⁰ Lucian, 27.

⁵¹ Lucian, 29.

of Jonah's suffering inside the whale. Marion Lawrence questions whether Lucian's tale is meant to "out-Jonah Jonah," serving as a parody of both "the Old Testament as well as the *Odyssey*."⁵² The crafty mariner Lucian found relative peace and prosperity within his host, unlike sinful Jonah, and chose to leave his whale captor only once the drive for adventure stirred again within him. No sin or shame or even punishment was to be found in this monstrous narrative. As shall be seen later in this chapter, life inside a whale is a frequent theme in medieval traditions, but no whale story in the medieval corpus is more common than the *Physiologus*.

The *Physiologus*, meaning "He who talks about nature," was written by an anonymous Christian author in Alexandria, between the second and fourth centuries AD.⁵³ Disseminated throughout the medieval world, the *Physiologus* existed in numerous editions: "It has been translated [into] Latin, Ethiopic, Arabic, Armenian, Syriac, Anglo-Saxon, Icelandic, Spanish, Italian, Provençal, and all the principal dialects of the Germanic and Romanic languages."⁵⁴ As the classical precursor to the medieval bestiary, the *Physiologus* is imbued with moral lessons based upon animal symbolism. The purpose of both the *Physiologus* and the bestiaries essentially is the same:

...the object of the bestiary is not to document the natural world and to analyse it in order to understand its workings. The writers of bestiaries...knew that everything in Creation had a purpose, and that the Creator had made nothing without an ulterior aim in mind. And they knew, too, what the purpose was: the edification and instruction of sinful man. The Creator had made animals, birds and fishes, and had given them their natures or habits, so that the sinner could see the world of mankind reflected in the kingdom of nature, and learn the way of redemption by the examples of different creatures. Each creature is therefore a kind of moral entity, bearing a message for the human reader.⁵⁵

The number of animals included in the vernacular editions varies, but the qualities, characteristics and illuminations of animals are generally preserved throughout editions: "The inheritance of the classical world was, so to speak frozen, or rather, preserved in a kind of Christian

⁵² Lawrence, 294.

⁵³ M. Curley, 'Physiologus, and the Rise of Christian Nature Symbolism,' *Viator* xi (1980) 1–10; French, 277.

⁵⁴ R. Barber, ed., *Bestiary; Being an English Version of the Bodleian Library, Oxford MS Bodley 764* (Woodbridge: Boydell Press, 1993), 4.

⁵⁵ Barber, 7.

aspic, until the Renaissance; the recorded habits of the beasts were fixed as unwavering traditions, and only the commentary varied.”⁵⁶ Thus, the image, features and description of the whale in the *Physiologus* varied little between cultural editions. It was a popular pan-European tradition.

While initially categorized within the *Physiologus* as balena, the whale became conflated with the creatures categorized under the entry of aspidochelone, which also included the sea turtle. The abilities of balena, such as spouting water at a great height, clearly reflect whale behavior seen as early as Strabo. This whale is described as a “a huge beast that spouts and blows out the water to a great height.”⁵⁷ Illustrations of balena seem more often to depict walruses “with short paddle-feet and huge downturned tusks,” although sometimes a balena has the appearance of a whale or a large fish.⁵⁸ The attributes of the balena became secondary to the ominous characteristics embodied by the aspidochelone.

The whale as aspidochelone came to be known as one of nature’s antipathies, and was associated, like other animals, with the Devil.⁵⁹ “The whale’s reputation, already unsavory in antiquity, was only worsened by the accounts of its treachery in the *Physiologus* and Bestiary.”⁶⁰

Aspidochelone was characterized by two distinctive behaviors. First, the whale possessed the ability to entrap its prey, usually fish, through the emission of a sweet, seductive odor released from its mouth. Unsuspecting fish were attracted by the scent, only to be devoured when the great cavernous mouth of the whale snapped shut, perhaps another variation of the engulfing whale of biblical tradition.⁶¹ Secondly, and

⁵⁶ Barber, 9.

⁵⁷ W. George and B. Yapp, *The Naming of the Beasts: Natural History in the Medieval Bestiary* (London: Gerald Duckworth and Co. Ltd., 1991), 96.

⁵⁸ George and Yapp, 96. A related category of marine mammals in bestiaries is delfinus, the dolphin, a fairly benign creature described as “the fastest moving thing in the ocean. It is a gregarious beast that congregates in schools; it is friendly to sailors and responds to the human voice” (George and Yapp, 97). In appearance, delfinus looks like a fish, with an exaggerated number of dorsal and ventral fins and a vertical fish tail rather than a horizontal fluke. Its head, however, is rounded and is without a beak, which could resemble a number of species of marine dolphins.

⁵⁹ The image of aspidochelone came to resemble a whale, while in some editions, balena appeared as a walrus. George and Yapp, 93–97. French, 285.

⁶⁰ Ziolkowski, 112.

⁶¹ *The Old English Physiologus*, ed. and trans. by A. S. Cook (New Haven: Yale University Press, 1921), 12–21.

rather impressively, the whale was able to disguise itself as an island. According to some traditions, the whale's back was covered with rocks, dirt, and even trees and bushes in the creation of this grand façade. Such a tempting oasis within the sea readily attracted sailors, who settled upon the island and made camp. This paradise of the weary sailors was lost when they began their cooking fire, for their island haven would suddenly dive to the bottom of the sea and drown the men or the whale would swim off into the remotest corners of the ocean. Saint Ambrose, in chapter eleven of the *Hexameron*, took the *Physiologus* description literally, offering this depiction of the insular appearance of the massive whales of the Atlantic:

What whales are found there, of huge bulk and measureless size! If they were to float on the surface of the sea, you would imagine that they were islands or extremely high mountains whose peaks reach to the sky! These animals are said to appear, not on the coast or on shore, but in the depths of the Atlantic Ocean. To catch sight of them sailors are enticed to risk navigation within those regions. But these elemental mysteries are not likely to be faced without experiencing mortal terror!⁶²

Called 'the dread preyer on mankind' in the Old English *Physiologus*, the whale is compared to devils who tempt men to comforts and decadence.⁶³ Likewise, men are drawn to the respite offered by the island-whale, just as the unsuspecting and tantalized fish are drawn into its gaping maw through the temptation of seductive illusions. Moral lessons abound within the *Physiologus*, and the whale, as one of nature's inherently evil creatures, became the embodiment of sin and weakness.

While the whale's malicious intent which lies behind these described behaviors is of course fictitious, actual observation of whales seems to be found in both depictions. Surfaced whales' long, broad backs, when seen from a distance, could appear to be islands. Also, some baleen whale surface feeding patterns, with their huge mouths agape, could appear as those described in the *Physiologus*. Both the *Physiologus* and its offspring, the bestiary, were traditions within which observation became inseparably enmeshed with mythology. While "the details [in bestiaries] are very rarely based on observation, on the experiences of the everyday world..." there must be a degree of early observation

⁶² St. Ambrose *Hexameron* IV.32, 187.

⁶³ *The Old English Physiologus*, 13.

behind these images, for without an established association between the creature and its described behaviors, the moral edification of the narrative becomes meaningless. "...The grain of literal truth in the bestiary is very much the grain of sand around which the pearl forms."⁶⁴

These descriptions of whale behavior from the *Physiologus* are repeated in later medieval bestiaries. The thirteenth century bestiary of Bodleian Mss 764 says this of aspidochelone:

It was this creature that took up Jonah; its stomach was so great that it could be mistaken for hell, as Jonah himself said: 'Out of the belly of hell cried I, and Thou heardst my voice' [Jonah 2:2]. This creature raises its back above the waves, and it seems to stay in the same place. The wind blows sea-sand on it and it becomes a level place on which vegetation grows. Sailors believe it an island, and beach their ships on it. Then they light fires, and when the creature feels the heat of the fire, it dives into the water and drags ships down with it into the depths. The same will befall those who are full of unbelief and know nothing of the wiles of the devil, trusting in him and doing his work; they will be plunged into the fires of Gehenna with him. The nature of the monster is such that when it is hungry it opens its mouth, and gives out a sweet scent; the little fishes smell this and gather in its mouth. When the monster's mouth is full of fishes it closes its jaws and swallows them. The same will befall those who are not firm in their faith, and yield to all delights and temptations as if drunk with scents; and then the devil swallows them up.⁶⁵

Clearly, there is no ambivalence in this depiction of the whale's evil alliance with the Devil in the bestiary. While the *Physiologus* expresses much the same message, the bestiary account further emphasizes this demonic association.

Although there are slight variations in whale descriptions found in the vernacular editions of the *Physiologus* and bestiary, these texts essentially are standardized throughout ancient and medieval Europe. Manuscript images of the aspidochelone are also uniform.⁶⁶ These

⁶⁴ Barber, 7, 9.

⁶⁵ Barber, 204.

⁶⁶ The Old Norse *Physiologus*, c. AD 1200, depicts aspidochelone embodying the same characteristics as described in all *Physiologus* texts, but some Norse editions offer two illustrations of the creature rather than the single unified depiction. These two illustrations led to "a tradition...about two separate animals" (Hermannsson, 11). In the Norse illuminations of the *Physiologus*, the whale appears more harmless than its fearsome description. This smooth-scaled creature has a rounded head and a rounded, arched back, ending in a scallop-edged tail. It also stands upon two short legs, presumably pectoral fins. In depicting its *Physiologus* behavior, the passive whale has fish jumping

medieval treatments of the aspidochelone depict the whale displaying two behaviors, often combined within one image (Fig. 7). In most depictions, the whale is shown with a ship and multiple sailors upon its back, the common theme of the whale as an island. The sailors are seen in a variety of activities, including anchoring the boat, chopping wood for a fire, or even being tossed into the sea by the spurious island. In addition to acting as an island, the whale is shown in a passive state with its mouth agape, as fish eagerly enter therein.

Aspidochelone takes on the appearance of a large fish in later English and Continental manuscripts. “In the illustrations, aspidochelone . . . can be blue, green, grey or brown; sometimes it is scaly; . . . sometimes it is bearded; . . . sometimes it has spiky fins.”⁶⁷ These whales all have large wide-open eyes and defined nostrils. Some have small dorsal fins on their backs, but most whales’ backs are instead covered with grasses and earth. While whales were known to be different from fish, there is little distinction in the manuscripts’ depictions of whales and fish, apart from showing the whale as a much larger animal. Whales are illustrated with fish-like scales and vertical split tails rather than horizontal flukes. Some manuscripts note the plumes of spray, either single or double, produced as the whale exhales. These plumes, placed upon the whale’s forehead, can give the appearance of horns rather than a blowhole. The ascription of horns to monstrous whales, seen in the later illustration and descriptions of Olaus Magnus, may derive from these earlier depictions.

These texts, from Strabo to the *Physiologus*, form a master set of narratives, a core of pan-European traditions that influenced later authors and texts of the Middle Ages. While the following texts are often derivative, they are not wholly unoriginal. They build upon the core traditions to reflect both their specific cultural contexts, particularly in the North Atlantic world, and their shared European heritage.



up into its mouth in one scene and in the other illustration it has small tufts of grass growing upon its back and has attracted a small boat which is docked near its head. This version differs little from other European depictions of *Physiologus* and could be seen as an introduction to this European tradition rather than an adaptation.

⁶⁷ George and Yapp, 95.

The Jonah tradition and the *Physiologus* and bestiary whales, with their roots in biblical and classical thought, epitomize the monstrous whales of medieval Europe. Many Christian authors utilized variations of the fantastic whale to teach humility, obedience and faith to readers or listeners, so not surprisingly, popular hagiographical accounts are among the texts most influenced by the monstrous whale traditions. The *Navigatio*, or the *Voyage of St Brendan*, first appears in a tenth-century manuscript, although it was probably composed in the ninth century on the continent when Brendan's *vita* was written.⁶⁸ This anonymous Latin text recounts a sea voyage taken by Brendan and fellow monks between islands of the Irish Sea. In a scene clearly influenced by the *Physiologus*, the monks spend one evening on a curious barren and rocky island: "there was hardly a grain of sand on the beach and only an occasional tree here and there."⁶⁹ Brendan, who "knew perfectly well what kind of an island it was," slept in the coracle, while the monks slept on the island. In the morning, they celebrated mass and cooked a meal when:

the island started to heave like a wave [and] moved away across the sea, and when it had gone two miles and more the monks could still see their fire burning brightly. Brendan explained the situation: ... 'Have no fear, my sons. Last night God revealed to me the meaning of this wonder in a vision. It was no island that we landed on, but that animal which is greatest of all creatures that swim in the sea. It is called Jasconius.'⁷⁰

In the *Navigatio*, Jasconius the whale is not in fact vicious and does not attempt to drag the brethren to the bottom of the sea, as whales do in other texts. The whale in the *Life of St Columba*, however, was not so docile.

The *Life of St Columba*, written by Adomnán in the late seventh century, includes a similar episode, only it is a fierce whale that is encountered along the sea route between islands off the western coast of Scotland. After being warned by Columba of a monster of the deep, two brothers encounter this terrifying whale during their journey. Brother

⁶⁸ D. H. Farmer, ed., *The Age of Bede*, trans. J. F. Webb (New York: Viking Penguin, 1988), ch. 10; Adomnán of Iona *Life of St Columba*, trans. Richard Sharpe (New York: Penguin Books USA Inc., 1995), I, 19; Farmer, 11.

⁶⁹ Farmer, 219.

⁷⁰ Farmer, 219; Farmer also explains that "Jasconius" is derived from the Irish *iasc*, meaning fish. This episode is lavishly illustrated in later editions of the *Navigatio*.

Berach fared poorly in this encounter, not heeding Columba's warning: "While crossing the open sea between Iona and Tiree he and those with him in the boat saw—look!—a whale of extraordinary size, which rose up like a mountain above the water, its jaws open to show an array of teeth....turning back in terror,...[the men] only just managed to avoid the wash caused by the whale's motion."⁷¹ Baithéne, another monk sailing that same day, listened to Columba's warning and when the monster whale rose before his boat, "...without a tremor of fear [Baithéne] raised his hands and blessed the sea and the whale. Immediately, the great creature plunged under the waves and was not seen again."⁷² These stories include fabulous elements but also frightening encounters with whales that could have occurred for the wandering monks of the northern world, whose small coracles and humble vessels could be easily engulfed by a whale of even moderate size. Unlike Nearchus, who massed battle forces to resist his cetacean attacker, calm brother Baithéne merely raised a hand in prayer to defeat the whale. Piety, rather than force, became the weapon of choice against an old enemy.

Not every medieval tradition borrowed slavishly from the monstrous whale archetype. Other monstrous whales, which seemed similar to the grasping mawed creatures of earlier moral myth, were born in medieval legend. The French legend of *Within*, written by the tenth-century monk Letaldus, borrows both from the *Physiologus* tradition as well as *Jonah*.⁷³ The protagonist of this tale, the Englishman named *Within*, encountered a whale while out at sea and *Within* and his boat were swallowed up by the creature. This poem, utilizing the basic premise of *Jonah* and *Physiologus*, has a twist. The *piscis grandis* here was not so lucky as the biblical beast. This whale was killed by *Within* while he was within the whale and both man and carcass drifted onto the English shore near Rochester. When the whale stranded, the locals rushed to butcher it but were horrified to find that something was alive inside of the dead creature. Their natural assumption, as they had been taught by other whale stories, was that the whale must be demonic or possessed. "[When] *Within* speaks from inside the beached

⁷¹ Adomnán of Iona, I, 19.

⁷² Adomnán of Iona, 126.

⁷³ Ziolkowski, 113.

whale, the townspeople of Rochester and their bishop at once assume the whale to be a demon....”⁷⁴ Before they would touch the whale, and before Within was freed, the whale had to be exorcised.

This whale of the Within tale, according to Ziolkowski, does not display the typical features of other evil whales from western literature, but it is tainted simply by the reputation which monstrous whales had created: “Letaldus...avoids evoking either the unclassical Leviathan or *Physiologus* whale; and yet he manages nonetheless to convey an unmistakable impression that the whale which engulfs Within is evil, even diabolic.”⁷⁵ The demonic association had become innate and whales were intimately linked with the symbols of evil.

A similar story to that told by Letaldus is found in the thirteenth century *Gesta Romanorum*, although in this tale the swallowed innocent is a virgin on her way to Rome for marriage. The *Gesta Romanorum*, a compilation of “edifying stories for the use of preachers,” includes 181 stories of moral import and entertainment derived from a variety of minor Roman authors.⁷⁶ One tale in the English version of the *Gesta* recounted an episode much like that of Within, yet here with a rather unique chivalric twist. According to the convoluted tale, Emperor Anselm of Rome contracted a marriage for his son with the daughter of the king of Ampluy. The sweet virginal girl suffered shipwreck on her voyage and both she and her wrecked vessel were swallowed by a great whale which had followed her ship.

...When she awakened and found herself swallowed up in the whale’s belly, she smote fire, and with a knife wounded the whale in many places, and when the whale felt himself wounded, according to his nature he began to swim to land. There was dwelling at that time in a country near by, a noble earl named Pirris, who for his recreation walking on the sea shore, saw the whale coming towards the land, wherefore he turned home again, and gathered a great many of men and women, and came thither again, and fought with the whale, and wounded him very sore, and as they smote, the maiden that was in his belly cryed with an high voice, and said, O gentle friends, have mercy and compassion on me, for I am a king’s daughter, and a true virgin from the hour of my birth unto this

⁷⁴ Ziolkowski, 113.

⁷⁵ Ziolkowski, 113.

⁷⁶ *Gesta Romanorum*, trans. Charles Swan (New York: E. P. Dutton and Co., 1924), vi. While identified as a collection of Roman narratives, the work also contains numerous stories influenced by contact with the Islamic East.

day. When the earl heard this, he wondered greatly, and opened the side of the whale, and found the young lady, and took her out...⁷⁷

Both Within and the *Gesta* virgin are without sin in these accounts, particularly the vehement virgin who attests plainly to her pure and blameless state. The moral implications of these stories are slightly more complex than those offered by the *Physiologus*. The engulfing whales remind the audience of the diabolical dangers that threaten even the spiritually pure. It is more likely, though, that a primary goal of these tales is entertainment, not unlike the classical narratives of monstrous whales, such as Lucian's great adventure story. Furthermore, the whale stories of the *Gesta* and Letaldus remind us that whales were not simply symbols. Both whales were viewed as resources by scavengers on the shore. The *Gesta* whale was eagerly sought after by noble Pirris who interrupted his stroll to fetch a group of locals to help him slaughter the whale. The whale which they smote was not pursued out of a chivalric desire to liberate the virgin. Pirris and his crew had no notion when they set upon the beast that a sweet young virgin was enclosed within. It is more likely that they simply sought the whale, like those Byzantines who sought Porphyrios, for what it most clearly represented, a massive bounty of resources. The men and women who accompanied Pirris were not only a retinue to fight the whale, they were a team needed to butcher it.



The image of whales in the early medieval tradition was influenced not only by Christian thought, but also by the simple practical knowledge that whales were an important resource. Early medieval texts offer a strong contrast to classical texts which portray whales solely as terrifying enemies or sporting opponents in the hunt, or those Christian narratives that use whales as moral signifiers. Among Anglo-Saxon narratives, the *Voyage of Ottar* and *Ælfric's Colloquy* are unique, as they focus on the whale as a resource rather than just a monster,

⁷⁷ *Gesta Romanorum*, 42–43. The idea that a wounded whale will by “its nature” swim to land seems to be a unique attribute seen in the *Gesta*, but not unfounded. Free swimming and uninjured whales often will remain with members of their stranded pod, returning to land even if freed or driven to sea by rescuers.

offering frank discussion of whales as animals rather than mysterious creatures. While whales continued to instill both fear and awe in their witnesses, these authors were more pragmatic in their descriptions of whales.

The Anglo-Saxons fully participated in the pan-European Christian traditions of monstrous whales discussed earlier, but in *Beowulf* and the Franks' Casket inscription, the monstrous whales are not Christian metaphors to be defeated by spirituality. Beowulf and Breca faced a host of sea beasts in their epic swim across the sea: "Each of us swam holding a sword, a naked, hard-proofed blade for protection against whale-beasts."⁷⁸ Beowulf's brutal battles with the *hron-fixas* makes it clear that these pseudo-whales were threatening, but not spiritually so. They were sea creatures pure and simple, with no ominous biblical allusions and defeated not by prayer but by iron.

The Franks Casket (Fig. 1) offers a brief and more spiritually neutral reference to a monstrous whale. The Franks Casket is a small lidded whale bone box (23 × 13 × 19 cm.) produced in early eighth-century Northumbria, decorated with intricately carved scenes from Roman, Jewish, Christian, and Germanic folklore.⁷⁹ Surrounding the carved scenes, the perimeter of each panel is surrounded by an intricate twisted cable border within which Latin and runic inscriptions are carved. The front panel depicts the Adoration of the Magi alongside the gruesome scene of Weland the Smith from Germanic lore.⁸⁰ The runic text on the front panel reads: "the fish beat up the sea on to the mountainous cliff. The king of ?terror became sad where he swam on to the shingle. Whale's bone."⁸¹ The inscription recounts the fate of

⁷⁸ *Beowulf*, trans. S. Heaney (New York: W. W. Norton and Company, 1995), 539–541; "*Hæfildon sword nacod, þa wit on sund rēon, heard on handa; wit un wið hron-fixas werian þōhton.*"

⁷⁹ I. Wood, "Ripon, Francia and the Franks Casket in the Early Middle Ages," *Northern History* 26 (1990): 1–19. Owing to the size, thickness and density of the panels, the bone is almost certainly Sperm whale mandible, among the most dense and finest bone of all whale species, and much like ivory in terms of workability. The panels are extremely flat and regular, and only a massive bone could allow such a consistent surface. It is not known whether all of the panels were derived from the same bone or the same whale, or whether this object might have been constructed from stock-piled bones.

⁸⁰ A. S. Napier, "The Franks Casket," in *An English Miscellany: Presented to Dr. F. J. Furnivall*, ed. W. P. Ker, 362–381 (New York: Benjamin Bloom, 1901).

⁸¹ "*fisc flodu ahof on fergenberg / warþ gasric grorn þær he on greut giswom / hronæs ban,*" Napier, 367; English translation from L. Webster and J. Backhouse, eds, *The Making of England* (Buffalo: University of Toronto Press, 1991), 101; A. Vandersall, "The Date and Provenance of the Franks Casket," *Gesta* 11, no. 2 (1972) 9–26.

the stranded whale whose bones made the casket, but it isn't clear why the craftsman felt it desirable or necessary to recount how this material was acquired. When read as a riddle, the inscription allows the reader to witness the drama which led to the material for the box itself. In the riddle, the whale is first described as a 'king of terror,' creating a link between the material of the box and the monstrous whales of classical and biblical traditions, possibly elevating the status and value of the material. Bones from the 'king of terror' may have been a fantastic material, particularly worthy for an object as unique as the Franks Casket. Whoever owned this fine casket could be edified and amused by its carved scenes while pondering the life of the fearsome animal who provided its bones for that very box.

Whales are approached as resources, in a somewhat different way in *Ælfric's Colloquy*. Written by Abbot Ælfric of Eynsham (955–1010), the *Colloquy* provides the most frank glimpse into Anglo-Saxon concepts of whale exploitation. The *Colloquy* was a teaching text used to instruct pupils in Latin grammar and vocabulary.⁸² The text, later glossed in Old English, is a series of dialogues between a master and his pupils, who take the roles of laborers and craftsmen, including a shepherd, oxherd, huntsman, and fisherman. Each man discusses his trade and its value with the master. The fisherman's discussion focuses on his work, his quarry and the lucrative nature of his trade. He informs the master that he fishes in the river, catching eels, pike, minnows, burbot, trout and lampreys, and on the rare occasions that he actually goes to sea, he also catches herrings, salmon, porpoise, sturgeon, plaice, flounders, and all manner of crustaceans and mollusks.⁸³ The fisherman's tackle includes his boat, net, hook, bait and baskets, although he does not specify whether his marine tackle varies from these riverine and lacustrine supplies. The master asks this ambitious fellow whether he would consider catching a whale, and the fisherman expresses horror

⁸² *Ælfric's Colloquy*, ed. G. N. Garmonsway (London: Methuen and Co. Ltd., 1939); "Ælfric's Colloquy," in *Anglo-Saxon Prose*, ed. M. Swanton (London: J. M. Dent, 1993), 169–177.

⁸³ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, 172. Barrett, Locker and Roberts, in "'Dark Age Economics' revisited: the English fish bone evidence AD 600–1600," call Ælfric's account one of the "earliest explicit Anglo-Saxon references to fish trade" (625), noting that this fisherman may represent an early record of the increased exploitation of marine fishes, part of the so-called 'fish event horizon,' or intensification of the marine fish trade in the late tenth through early eleventh century. J. Barrett, A. Locker and C. Roberts, "'Dark Age Economics' revisited: the English fish bone evidence AD 600–1600," *Antiquity* 78, no. 301 (2004): 618–636.

at this notion: "...it is a risky business catching a whale. It's safer for me to go on the river with my boat, than to go hunting whales with many boats...I prefer to catch a fish that I can kill, rather than a fish that can sink or kill not only me but also my companions with a single blow."⁸⁴ The dialogue concludes with the master's observation that those who are bold enough to hunt whales make great profit from this risky venture.⁸⁵

This lengthy account of Ælfric's fictional dialogue reveals more than any other Anglo-Saxon text on perceptions of whales and whale use. We learn that this fisherman finds it both prudent and economically practical to rely on freshwater fish for the majority of his sellable catch, even though he cannot meet market demand with such fishing ventures.⁸⁶ Fishing expeditions at sea, if for no other reason than the size of the bounty, would likely require larger tackle, greater risk and perhaps a greater investment in men and time. The relative difficulty of transporting maritime species versus riverine or lacustrine species must also be considered, although by the eleventh century, long distance trade in fish had begun to increase.⁸⁷ Depending upon the season some marine species could not make it to market without threat of spoilage. Certainly the physical exertion of marine fishing would be much higher than the toils of riverine efforts, where nets and weirs could also be employed.⁸⁸

From this dialogue, we gain a fair impression of the labor involved in the work of a fisherman. But why does the master bring up the issue of whale hunting? Does he conceive of whales as just another type of fish, hence equating whale hunting with fishing, or does he recognize the distinction between whales and the fish caught by this fisherman? The Old English gloss of this dialogue uses both *hwæl* and *fisc*. The question of the master regarding whales is asked with the word *hwæl*, while the fisherman replies that he would rather catch fish (*fisc*) that cannot kill him.⁸⁹ If porpoises are considered just another

⁸⁴ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, 172.

⁸⁵ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, 172.

⁸⁶ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, 171.

⁸⁷ Barrett, Locker and Roberts, 627.

⁸⁸ M. Aston, ed., *Medieval Fish, Fisheries and Fishponds in England*, BAR British Series 182 i, ii (Oxford: British Archaeological Reports, 1988); R. C. Hoffmann, "Economic Development and Aquatic Ecosystems in Medieval Europe," *American Historical Review* 101, no. 3 (1996): 631-669.

⁸⁹ "Ælfric's Colloquy," in *Anglo-Saxon Prose*, 172.

type of marine fish, perhaps some species of cetaceans were considered similarly accessible quarry. The fisherman's response, though, indicates that *hwæl* clearly denotes larger species. No specific method of acquiring whales is mentioned, but the fisherman does state that many boats are needed for whale hunting and companions are also required, unlike his preferred river fishing which requires only himself and his boat. This reference to many boats and companions could allude to drive-whaling. While this driving or rounding-up method usually was used to capture an entire pod of whales, multiple boats could also be used in the pursuit of single large whales. These whales were more capable of destroying a boat than a pod of small whales, although injured Pilot whales in the Faroese whale drives have been known to damage boats and injure men. The use of multiple boats reveals a communal effort in hunting and perhaps this fisherman prefers the simplicity, and the profit, of an individual effort.

It must be remembered that Ælfric would have used this discussion of whaling to drive home a moral or ethical point to his pupils. Was the timid fisherman demonstrating moderation and wisdom in his refusal to hunt whales, or was his fear irrational and below his station? After all, one purpose of the dialogue was to make the students consider that whatever calling they found in their lives, from monasticism to fishing, they must labor at that calling to the best of their ability. The dialogue could also invoke the image of whales from saints' lives or the *Physiologus*. The fisherman has no desire to exceed his basic needs in fishing, and hence he does not pursue whales. This lack of greed demonstrates that the fisherman was not susceptible to the sorts of temptations of the *Physiologus* whale. He could represent other model fishermen of Christian tradition in this regard. The fisherman is content with his station in life and he provides a good, moral example to the students who read of his craft.

This dialogue provides important insight into whaling ventures in Anglo-Saxon England. It may be gathered from this text that whaling was considered the job of the fisherman and that there was not a specialized whaling industry. Whaling required multiple boats and many crew members and it involved a higher degree of danger than fishing, as well as a higher expenditure in labor and equipment. The biggest question left unanswered, though, is the frequency of Anglo-Saxon whaling. At the conclusion of the discussion between master and fisherman, after the fisherman's final statement that he is too timid to hunt whales, the master says: "Nevertheless, many catch whales and

escape danger, and make a great profit by it.”⁹⁰ Here, Ælfric could be referring to people who catch whales locally around England, or he could be speaking in much broader terms, perhaps having heard of the whaling ventures in contemporary Normandy or Norway.

The account of the Norwegian traveler Ottar’s voyage to Arctic Scandinavia provides a convenient segue between conventionally limited European or English whale use and the richer Scandinavian traditions of whale hunting. The merchant-hunter whom we meet in this text is no timid fisherman as seen in the preceding *Colloquy*. While the *Voyage of Ottar* is an Old English work, it differs greatly from the other Anglo-Saxon texts because it is reputedly the story of a Norwegian traveler reported through an Anglo-Saxon narrator. Ottar’s voyage to northern Norway was recounted before the court of King Alfred of Wessex (871–899). Ottar reported to the king that there was good walrus hunting in the north, but that: “The best whale hunting is in his own country; those [whales] are forty-eight ells long, the biggest fifty ells long; of these he said that he, one of six, killed sixty in two days.”⁹¹ The Old Norse ell roughly equals eighteen inches, so the whales which Ottar claimed to have hunted were approximately seventy-five feet long.⁹² Some historians contend that the quarry must have been Right whales: “It seems that Ottar can hardly have been referring to any other than Biscay Right Whales.... It should be remembered...that although large, the Right Whales are comparatively docile and can be taken with quite simple tackle.”⁹³ Right whales, described as approachable and even playful, are also a logical choice for non-industrialized hunters to pursue because this species floats when dead, making controlled recovery possible.⁹⁴ If these were Right whales, then Ottar’s sixty whales, ranging from thirty to eighty tons apiece, represent several thousand tons of whale. The mechanics of transporting, butchering, rendering or preserving such a quantity seems unthinkable, but the purpose of Ottar’s expedition

⁹⁰ “Ælfric’s Colloquy,” in *Anglo-Saxon Prose*, 172.

⁹¹ N. Lund, ed., *Two Voyagers at the Court of King Alfred: The Ventures of Ohthere and Wulfstan together with the Description of Northern Europe from the Old English Orosius*, trans. Christine Fell (York: William Sessions Limited, 1984), 20.

⁹² G. Clark, “Whales as an Economic Factor in Prehistoric Europe,” *Antiquity* 21 (March 1947): 86.

⁹³ Clark, 1947, 86.

⁹⁴ M. Carwadine, *Whales, Dolphins and Porpoises* (New York: DK Publishing, Inc., 1995), 44.

was acquisition of exactly these resources. While Ottar's story perhaps does not recount a routine whaling venture, the text reveals greater familiarity with whaling among Norwegians than with their contemporaries in England. The quantity of whale products secured by Ottar and his crew represent an important Norwegian commodity which served as subsistence resource as well as tribute.

This passage in Ottar's tale is as telling of Anglo-Saxon unfamiliarity with whales as it is of Norwegian whaling. The Anglo-Saxon translator is forced to describe with a limited vocabulary the variety of marine mammals encountered by Ottar. The translator must use the same word repeatedly for different animals, including walruses and whales.⁹⁵ The word used by the translator for whale is *hwæl*, a general term which did not designate any particular kind of whale. The Anglo-Saxons seemed to have only two words for whales, namely: *hwæl*, as appears in this text and in *Ælfric's Colloquy*, and *hron*, as appears in the runes on the Franks Casket. Christene Fell reports that Old Norse had at least twenty-six terms for whale, some of which were poetic synonyms, but others were clearly different names for different kinds of whales.⁹⁶ Ottar's text demonstrates that the Anglo-Saxons struggled to translate the terms for the marine mammals of the northern seas. This may imply that the Anglo-Saxons had significantly fewer encounters with cetaceans, or perhaps a lesser need for precise terminology for whales and marine mammals than did the Scandinavians.⁹⁷

The whales, whalers and authors discussed in this chapter have revealed in a shift in European medieval thought, from simple depictions of whales as monsters to more sophisticated analyses of the economic value of whales and dangers in acquiring them. While many texts reveal a dependence of some kind on classical or biblical notions of whales, personal experience also influenced how whales were depicted.

⁹⁵ The term *horshwæl* is used once to differentiate walrus and whales, although through the rest of the text, only *hwæl* is used.

⁹⁶ C. Fell, "Some questions of language," in *Two Voyagers at the Court of King Alfred: The Ventures of Ohthere and Wulfstan together with the Description of Northern Europe from the Old English Orosius*, ed. N. Lund, trans. Christine Fell, 58 (York: William Sessions Limited, 1984).

⁹⁷ Barrett, Locker and Roberts, citing Sayers, also note that "recent research has shown that there was not even a word for cod in the Anglo-Saxon language of pre-Norman England" (623). The Anglo-Saxon vocabulary seems to have been limited for many marine species.

This chapter concludes with one of the greatest commentators on and observers of whales and their practical utility in medieval Europe, the great Dominican friar, bishop and saint, Albertus Magnus. Albert the Great represents a perfect fusion of medieval tradition, as he is both beholden to past traditions but also, in the high medieval spirit of natural philosophy, keen to observe God's work in the natural world.



While all of the authors whose works are discussed in this chapter offer unique and fascinating insights, the observations of Albertus Magnus (1193–1280) deserve singular attention for their clarity and detail. This thirteenth-century churchman and intellect, mentor to Thomas Aquinas, is held to be one of the most prominent scientific minds of the Middle Ages.⁹⁸ One of his greatest works was *De Animalibus*, a multivolume encyclopedic work which derived its contents both from classical and medieval authors but also from his own observations of nature. Book twenty-four of *De Animalibus*, one of the most acclaimed of his observational texts, presents Albertus' studies of aquatic animals, whales, dolphins, and a variety of sea monsters.⁹⁹

Albertus called "...upon an abundant store of zoological knowledge accumulated during his travels and [cited] a number of authorities for animals that lay beyond the ken of his own experience."¹⁰⁰ Albertus' observational talents and his eye for detail makes this work an invaluable source for medieval whale use:

...on the coast of Friesland and the offshore islands of the Netherlands [Albertus] watched fishermen beach and flense the carcasses of whales caught in the North Sea or Atlantic Ocean....As a fascinated bystander, Albertus viewed the efforts of the fishing community to conserve the Sperm oil, render the whale blubber and retrieve the baleen and whale bones; with the instinct of a commercial jobber, he registered the

⁹⁸ Albertus the Great *Man and the Beasts; De Animalibus (Books 22–26)*, trans. J. Scanlan (Binghamton, NY: Medieval and Renaissance Texts and Studies, 1987), 1–5.

⁹⁹ There is some dispute over the actual levels of personal observation reported in Albertus' work; J. B. Friedman, "Albertus the Great's topoi of direct observation and his debt to Thomas of Cantimpré," in *Pre-modern Encyclopaedic Texts*, ed. Peter Binkley (New York: Brill, 1997), 379–392.

¹⁰⁰ Scanlan in Albertus the Great, 2.

volume of flesh and bones recovered from the slaughter of individual carcasses.¹⁰¹

Albertus himself had much first-hand observation of whale use but his report on whale species relied heavily on previous authors' descriptions. Many of the categories which he presents, including *Aries Marinus* (Killer whale), *Beluae* (sea monsters), *Cetus* (whale), *Orcha* (*grampus*) and *Pistris* (Sperm whale), are merely versions of whales or sea monsters described by Pliny. Albertus, though, promotes his personal observation as a major source of insight. In his entry on *Cetus*, he goes so far as to say that his reliance upon the ancient authors was minimal: "We have omitted what the ancients wrote [about the nature of whales], because they do not accord with the practical knowledge of experienced fishermen."¹⁰²

However, as others have shown, Albertus relied on earlier and contemporary authors more than he acknowledged, especially the work of Thomas of Cantimpré.¹⁰³ Thomas's work is as reminiscent of direct observation as is Albertus' and both certainly include first-hand experience.¹⁰⁴ Albertus' use of Thomas as a source on marine creatures, however, is unfortunate, given the fact that "Thomas' errors are most numerous in his books on fishes and *monstra marina*... In fact, Thomas does not even know what to call these *monstra*, and, either through misunderstanding of his sources or through the use of corrupt manuscripts, he unintentionally invents several new terms for them."¹⁰⁵ Albertus, following Thomas, misrepresents and often corrupts the maritime knowledge of the ancients. Both authors invent new species of fish and whales or misrepresent known species, with Albertus both following and adding to the errors of Thomas. For example, both authors erroneously report that male dolphins eat their young, in a corruption of Solinus' account that dolphins carry their young in their mouths. Because he borrows so heavily at times from other sources, Albertus' interpretation falls into error or succumbs to popular mythology, as seen in his statement that the mouth of a baleen whale is

¹⁰¹ Scanlan in Albertus the Great, 22–23.

¹⁰² Albertus the Great, XXIV, ixx.

¹⁰³ While the work of Thomas of Cantimpré is extremely valuable, it will not be examined in any depth in this discussion. See Thomas Cantimpratensis *Liber De Natura Rerum* (New York: Walter De Gruyter, 1973), and Friedman, 1997.

¹⁰⁴ Friedman, 391–392.

¹⁰⁵ P. Aiken, "The Animal History of Albertus Magnus and Thomas of Cantimpre," *Speculum* 22, no. 2 (Apr. 1947): 207.

actually a giant eye-socket, with the baleen serving as an eyelash which closes to protect the eye during storms at sea.¹⁰⁶ Errors of repetition, however, do not wholly diminish the quality and detail of Albertus' report of other aspects of the northern whaling industry.

Albertus' work departed from that of many contemporaries and predecessors through his focus on the economic and scientific relevance of whales. He devoted great attention to the production and use of whale oil but also to the quantities of blubber, as well as bone and meat, gained from each whale:

... we once witnessed the bulk of a whale which was so large that its body, after being cut into manageable sections of flesh and bones, filled three hundred wagons. Such large whales are not commonly captured, but our contemporaries often catch specimens that require from one hundred and fifty to two hundred wagons, more or less, for haulage.¹⁰⁷

Two significant details may be gleaned from this brief passage. First, even in modern terms, this quantity of resources from the whale is astonishing: "Assuming that a medieval wain or four-wheeled wagon, drawn by a pair of draught horses, could be laden with 500–1000 lbs. of whale blubber and bone, Albertus' whale could have weighed 75–150 tons, consistent with the weight of a large right whale."¹⁰⁸ However, one could also assume that blubber would be rendered at a coastal location, so that much of the haul actually may have been composed of meat, bone, and barrels full of oil.¹⁰⁹ The difficulty of transportation of large whale bones or tons of whale meat and blubber, and the massive labor expenditures required by such a venture, explain why whales were a formidable quarry for prehistoric and medieval peoples. While this example from Albertus' work is perhaps uncharacteristic in the massive quantities of products being taken away, it does show that meat and oil were not the only valued products. In a rare reference, bones were also valued enough to be transported from the butchering site. Secondly, Albertus notes that smaller whales also are caught, and

¹⁰⁶ Albertus the Great, XXIV, xv; The same error is repeated in the mid-sixteenth century by Olaus Magnus; Olaus Magnus, *Historia de Gentibus Septentrionalibus Romae 1555*, ed. Peter Foote, trans. Peter Fisher and Humphrey Higgins (London: The Hakluyt Society, 1996), XXI, xviii.

¹⁰⁷ Scanlan in Albertus the Great, 16, 337.

¹⁰⁸ Scanlan in Albertus the Great, fl6.2, 337.

¹⁰⁹ J. Tuck and R. Grenier, *Red Bay, Labrador: World Whaling Capital A.D. 1550–1600* (St John's, Newfoundland: Atlantic Archaeology Ltd. 1989).

large whales caught less frequently. He does not quantify the number taken, or the frequency, but his observation reveals that whales roughly half the size of the massive quarry in his example are more common resources.

Among Albertus' greatest contributions to medieval knowledge of whales was his report on the methods and technologies of whale hunting as he observed them in the Netherlands. Albertus cites two hunting methods in the *Cetus* entry, his largest entry of the chapter, although one method is devoted to the means of killing walrus.¹¹⁰ Albertus' whaling strategy involves several small boats with groups of hunters in teams of three who attempt to harpoon a single large whale. The boats work together, with the harpooner of each boat casting his weapon into the whale before it dives from the surface. If the whale swims off, the fishermen cut ropes and halt pursuit, thus losing both their quarry and their equipment. If it dives, though, then the fishermen assume that the whale has been critically injured and that it has gone to the ocean bottom in an attempt to remove the harpoons embedded within its skin.¹¹¹ Once the whale surfaces, the fishermen continue to wound it until it can be attached to boats and towed to shore. A variation on this strategy involves the use of a harpoon which is not hand-held, but rather "...is launched from a powerful ballista."¹¹² The description of the harpoon used by these hunters appears to be a typical barbed hook that would be used in other fishing ventures:

The harpooner's weapon consists of a shaft fashioned from pine wood to make it lighter; at the end of the shaft near the place where the harpooner grasps it in his hand is a hole through which the end of a rope is knotted; this stout rope is extremely long and, prior to the hunt, is carefully coiled in circular fashion at the bottom of the boat, so that when the harpoon is unleashed, the attached rope will follow the trajectory of the weapon without a hitch. The point of the harpoon has below it a triangular projection like a barbed arrow, whose lateral angle is very sharp and honed for easy penetration of the whale's skin. The two leading edges

¹¹⁰ Albertus tells us that a heavy rope, which is secured to the coastal rock by heavy metal rings, is tied around the tail of a sleeping walrus. The walrus, once secured, is then awakened by the fishermen lobbing rocks at its head, and the walrus, in a hurry to escape, strips the skin from its tail, causing it to lose great amounts of blood and thus be weakened and more easily killed at sea. Scanlan in Albertus the Great, 19, 340–41.

¹¹¹ Albertus the Great, XXIV, xviii.

¹¹² Albertus the Great, XXIV, ix.

of this triangular barb come to a point like the sharpest of daggers, . . . At the center of the triangular barb's base, opposite the point, is welded a cylindrical piece of steel, perpendicular to the base of the triangle and measuring about a cubit in length or slightly more.¹¹³

Without its barbs, this hook could not withstand the whale's attempts to rid itself of the harpoon. If these weapons were lost with whales, the very high cost of whale hunting can be appreciated. The timid fisherman of *Ælfric's Colloquy* seems wise in his avoidance of whaling and its ardors. Such challenges and losses were real and common among the North Atlantic hunters whom we will meet in later chapters.

From the Old Testament to Albert the Great, traditions surrounding human perceptions of whales reveal continuity and a measure of creativity. Whales are shown to be affiliates of diabolical forces, they are usually frightening to encounter, and yet they are, without question, valuable. As creatures associated with the Devil, they offer a challenge to Christian mariners. At best, they can illuminate and liberate the sinful from sinful ways, as Ambrose believed in his *Hexameron*. They pursued both the sinful and the sinless, as seen in the tales of Within and the *Gesta* virgin. Less symbolic views, though, likewise advocate caution in maritime encounters with whales. Those who pursued whales developed specialized strategies to capture this great quarry. Even the hardest sailors, and those without sin, recognized the power of whales. From European myth to North Atlantic reality, this study now turns to those most familiar with the power of whales and the immense resources which they provided. North Atlantic communities, such as the Faroese or Icelanders, have relied on whales for hundreds of years and have developed strategies to acquire tons of whale resources annually in one of the most inhospitable maritime realms, the furious North Atlantic. To understand the people of the North Atlantic world, past or present, one must first appreciate the world in which they live.

¹¹³ Albertus the Great, XXIV, xviii.

CHAPTER THREE



WHALES AND NORTH ATLANTIC ECOLOGY

Ottar, the whaler extraordinaire described in chapter two, was either a liar or an exceptional hunter, supposedly taking sixty whales in two days. What Ottar failed to describe was how he came by and caught these whales. Were they driven ashore, unlikely for large whales, or hunted at sea? If hunted, were they speared, harpooned, encircled in nets, or captured in some other way? The most contentious issue of whale use in the premodern world is the means by which whales were acquired, whether scavenged as fate allowed or actively pursued. This is no mere historical curiosity, for many modern whaling nations maintain that the hunt for whales hearkens to their country's ancient past, an archaic and long-held freedom of their coastal peoples. Norway's Ministry of Foreign Affairs has contended that: "[h]unting for minke whales along the coast of Norway is ancient practice. Whaling was mentioned in written sources as early as the 800s and hunting minke whales with harpoons was common in the 1200s."¹ The historical record rarely allows such confident assertions, since few medieval texts make explicit the precise means by which whales were acquired. Those sources that do reference whale acquisition may state rather simply that whales are

¹ Ministry of Foreign Affairs, "Norwegian minke whaling: Coastal livelihood and natural resource management," 4/16/2004; Original document no longer available, now found at "Norway: Official Site in the UK" at <http://www.norway.org.uk/policy/environment/marine/minkewhaling.htm> (accessed 17 June 2007).

shot, driven or stranded. Medieval lawcodes, especially those of Norway and Iceland, are rare exceptions as they do allude, albeit obliquely, to more specific whaling strategies. Even in these texts, though, the issues of quantity and frequency of whale hunting are unaddressed. The next chapter considers the dilemma of acquisition, but this chapter begins with the necessary context, namely the whales themselves and their many uses, the waters they occupied, and the history of North Atlantic expansion. The Norse men and women who traversed the North Atlantic and the whales they used along the way and in their new homes cannot be understood without knowledge of their greater ecological context.²

Why the Norse began their ventures across the North Atlantic has long been the subject of debate, as has the question of when the Norse expansion began. The Viking Age is traditionally dated from the ninth and eleventh centuries, although Scandinavian contact with continental trading centers in the eighth century has prompted some historians to conclude that “the beginning of the Viking Age [should be advanced] well before the conventional historical date of AD 800.”³ One cause behind the escalation of Norse travel was mastery of new maritime technologies, specifically the square sail, that was added to their vessels sometime in the seventh or early eighth century: “Although the sources are admittedly limited, they strongly indicate that until around 700, ships were rowed... [The] Nordic type of hull was not well developed and strong enough to withstand stresses set up by sail and rigging until around 800.”⁴ The sail may explain how the Norse set out upon the North Atlantic, but it does not adequately explain why they set out. The sail facilitated but did not cause Norse territorial expansion.⁵

Other forces at work within the Norwegian homeland contributed to the emigration throughout the North Atlantic. Norse expansion may

² See Maps 1–4 for the geography of Norse expansion from Norway (Map 1) to the British Isles (Map 2) and further afield (Maps 3 and 4).

³ C. Morris, “Viking Age in Europe,” in *Vikings: North Atlantic Saga*, eds. W. Fitzhugh and E. Ward, 100 (Washington: Smithsonian Institution Press, 2000). O. Vésteinsson, T. McGovern, and C. Keller date the Viking age more expansively, from AD 750–1050; see “Enduring Impacts: Social and Environmental Aspects of Viking Age Settlement in Iceland and Greenland,” *Archaeologia Islandica* 2 (2002): 98.

⁴ A. E. Christensen, “Ships and Navigation,” in *Vikings: The North Atlantic Saga*, eds. W. Fitzhugh and E. Ward, 87–88 (Washington: Smithsonian Institution Press, 2000).

⁵ Christensen, 2000, 88.

have resulted from increased economic contact with the continent, which stimulated expansion further west.⁶ Other explanations for expansion cite population pressure upon limited agricultural production, royal pressure upon the minor yet competitive chieftains from the growing kingdoms of Western Norway, religious pressure of conversion upon staunch and faithful pagans, or even simple adventure-seeking and wanderlust. One recent study of the historiography of Icelandic *landnám* noted that “[the] modern citizens of these [North Atlantic] societies are equally intrigued by the abrupt beginnings of their nations’ past, . . . asking whether they are simply the descendants of irritated Norwegians or in some way unique.”⁷ Whatever the reasons behind the expansion, the settlement of newly colonized island environments provides scholars virtually unparalleled opportunity to study transplanted and modified cultural, social, political, economic and legal systems. From an environmental perspective, human impact on virgin ecosystems such as Iceland’s may be documented in incomparable ways.⁸

The reasons behind Viking voyages and Norse territorial expansion into the North Atlantic are not the same, nor should the two phenomena be confused. Once the first Western Norsemen set out upon the North Atlantic and found unoccupied or poorly defended lands, a wave of emigration followed. The untamed North Atlantic lands of the Faroes, Iceland and Greenland may seem unlikely refuges to modern sensibilities, but they presented unlimited opportunities to Norse land-takers. They were, for the most part, unsettled territories with surprisingly rich land within reasonable sailing distance from Norway. Shetland and Orkney were exceptions, as they were populated and cultivated by Iron Age peoples and Picts, who had established by the eighth century powerful localized chiefdoms throughout the islands. The western North Atlantic, though, was essentially unpopulated apart from the seals, seabirds and perhaps the monks, papir or hermits of Celtic Christian tradition, whom the Norse may have encountered.

The manner of settlement in Orkney and Shetland is a subject of controversy, like virtually all aspects of this preliterate Viking Age, as

⁶ Morris, 2000, 100.

⁷ A. Friðriksson and O. Vésteinsson, “Creating a Past: A Historiography of the Settlement of Iceland,” in *Contact, Continuity, and Collapse: The Norse Colonization of the North Atlantic*, ed. J. Barrett, 139 (Turnhout, Belgium: Brepols Publishers, 2003).

⁸ T. Amorosi, et al., “Raiding the Landscape: Human Impact in the Scandinavian North Atlantic,” *Human Ecology* 25 (1997): 491–518; Jon P. Sadler, “Biodiversity on oceanic islands: a palaeoecological assessment,” *Journal of Biogeography* 26.1 (1999): 75–87.

archaeology fails to clearly indicate whether the Norse settlement was peaceful or violent. The Norse settled the Northern Isles of Scotland by the ninth century, although contact with the Isles may have begun in the previous century.⁹ After several decades of integration or subjugation, the Norse became the preeminent culture of Northern Scotland, occupying the Northern Isles, Sutherland and Caithness and finally the Western Isles. The Norse expansion carried on, reaching the Faroe Islands by the mid-ninth century, perhaps as early as 825, followed by Iceland in 870, Greenland by 985, and Newfoundland, the westernmost documented settlement, by 1000 (Map 3). It cannot be forgotten that the settlements across the North Atlantic were interconnected politically, socially, economically and culturally. Family groups spanned the North Atlantic and journeys were made with some frequency between islands and the Norse homeland. The North Atlantic was handily traversed in the best of times, while in the worst of times journeys were lengthened, postponed or waylaid, but journeys were always made. *Landnámabok* recounts the travel days across the North Atlantic.

According to learned men it takes seven days to sail from Stad in Norway westwards to Horn on the east coast of Iceland, and from Snæfellsness four days west across the ocean to Greenland by the shortest route. People say if you sail from Bergen due west to Cape Farewell in Greenland, you pass twelve leagues south of Iceland. From Reykjaness in South Iceland it takes five days to Slyne Head in Ireland, four days from Landaness in North Iceland northwards to Spitzbergen in the Arctic Sea, and a day north from Kolbein's Isle to the wild regions of Greenland.¹⁰

While the Norse made up the bulk of the Icelandic and other North Atlantic populations, they were not the sole settlers, bringing with them slaves, followers and family from their other territories. A Celtic presence emerged in the farthest reaches of the Norse North Atlantic, including Irish and Gaelic slaves and followers, as well as free Norse settlers from Britain and Ireland, all of whom brought with them culturally and ecologically varied traditions for subsistence.¹¹

⁹ Several authors engage in this important debate in J. Barrett, ed. *Contact, Continuity, and Collapse: The Norse Colonization of the North Atlantic* (Turnhout, Belgium: Brepols Publishers, 2003b).

¹⁰ *The Book of Settlement: Landnámabok*, trans. H. Pálsson and P. Edwards (Manitoba: University of Manitoba Press, 1972), 2.

¹¹ V. Ólason, *Dialogues with the Viking Age: Narration and Representation in the Sagas of the Icelanders*, trans. A. Wawn (Reykjavík: Mál og Menning, 1998), 24. See also S. Goodacre, et al. "Genetic evidence for a family-based Scandinavian settlement of Shetland and Orkney during the Viking periods," *Heredity* 95 (2005): 129–135.

Iceland, of course, was the preeminent colony of the North Atlantic world. *Landnámabók*, Iceland's Book of Settlements dating from the early twelfth century, recounts the story of Iceland's first families who emigrated from Norway in 870, initiating the great land claim that lasted for sixty years. *Landnámabók* details approximately four hundred early settlements founded in Iceland, from the first generation of settlers through the third. Ari Thorgilsson (1068–1148), who was reportedly involved in the compilation of *Landnámabók*, also wrote the earliest history of Icelandic settlement in *Íslendingabók*, a record of the settlement era, the establishment of the government, and the codification of early law. From 890 to 910 the best land was claimed, including farmland and coastline, as well as access to pasturage, mountains and forests.¹² By 930, when the population ranged between twenty and thirty thousand, Ari declared Iceland to be *albyggð* or completely settled.¹³ Whereas settlers in the Faroes had little choice but coastal settlement given the mountainous landscape of their archipelago, Icelanders occupied the island to fullest extent, from the coasts inland through fertile river valleys. Following the initial period of land-taking, the settlers reproduced to best effect their lives in Scandinavia, importing animals and equipment necessary to rebuild their agricultural lifestyles. "The West Norwegian agrarian economy which was based on sheep, goat, pig, cow, and horse farming, was immediately transferable to the northern maritime climate of the North Atlantic islands with little loss except for the inability to grow grain in all but the most favorable locations. The Norse economy was almost completely self-sufficient."¹⁴

Settlements across the North Atlantic varied enormously in the natural resources that they offered to the colonists. While Orkney was more agriculturally productive than much of Scandinavia, Shetland and especially the Faroes were agriculturally challenged.¹⁵ Strategic

¹² Extensive environmental and archaeological surveys of Iceland, particularly dating by tephra, reveal the periods of greatest ecological change as those same periods of greatest settlement pressure.

¹³ T. M. Andersson and W. I. Miller, *Law and Literature in Medieval Iceland: Ljósárvetninga saga and Valla-Ljóts saga* (Stanford, CA: Stanford UP, 1989), 5.

¹⁴ W. Fitzhugh, "Puffins, Ringed Pins, and Runestones: Viking Passage to America," in *Vikings: The North Atlantic Saga*, eds. W. Fitzhugh and E. Ward, 18 (Washington DC: Smithsonian Institution Press, 2000).

¹⁵ By the later Middle Ages, when Iceland and Greenland had begun to suffer under deteriorating climatic forces and an exhaustion of quality arable land, Orkney remained a prominent provider of grain: "Substantial demand for grain [in Iceland], which might have been regulated by local chiefs to retain power in early Norse society... appears to have been satisfied through trade with the Northern Isles of Scotland rather than

exploitation of multiple ecological niches was necessary for survival. Likewise, Icelandic settlers could not rely solely on arable production during the Age of Settlement. Coastal rights, including scavenging, hunting, and fishing rights, were essential to survival, just as they were at home in Norway.¹⁶ The adventuresome settlers across the North Atlantic were repaid for their risk and investment by the resources of their new lands: “To a farmer from western or northern Scandinavia, Iceland would have seemed a prosperous land, with plenty of fish and seal, good and extensive meadows to provide fodder, and enormous tracts of pasturage. In the south and west barley could also be grown, providing the conditions for the same sort of lifestyle the settlers knew from their homeland.”¹⁷

Scavenged and hunted resources, particularly maritime resources, likely were essential in the first years of North Atlantic settlement, so important that they were to be collected even on Sundays and holy days. Church law, as recorded in Iceland’s thirteenth-century *Grágás*, permitted wild bounties to be captured even when other work was prohibited:

There are fifteen days each year when men are not to hunt and fish more than I shall now enumerate. Men may catch a polar bear and leave house for this purpose, and the bear is property of whoever gives it a death wound, no matter who owns the land.... Men may hunt walruses and the man who catches one has half and the landowner has half. A drifting or stranded whale may be moved and secured or cut up if it cannot be secured. If fish ‘come ashore,’ then men may catch them. Nets and hooks may not be used....

Zooarchaeological analysis of food remains from early Icelandic sites reveals higher percentages of wild game, including marine mammals

through local production” I. A. Simpson et al., “Soil Limitations to Agrarian Land Production in Premodern Iceland,” *Human Ecology* 30, no. 4 (December 2002): 424. Orkney, unlike Shetland, was agriculturally fertile and productive, an exporter of crops and a powerful center for control over Shetland, Northern Scotland and even at times the Hebrides. *Islendinga Saga* and *Bandamanna Saga* include references to Orcadian merchants and Icelandic buyers of various cargoes of grain (Simpson et al., 424).

¹⁶ Zooarchaeology indicates a heavy reliance on both domesticates and wild resources; cattle, sheep, pigs, goats, seabirds and freshwater fowl, and especially fish were prominent in most assemblages as protein resources.

¹⁷ O. Vésteinsson, “The Archaeology of *Landnám*: Early Settlement in Iceland,” in *Vikings: The North Atlantic Saga*, eds. W. Fitzhugh and E. Ward, 165–167 (Washington DC: Smithsonian Institution Press, 2000).

and birds, during *landnám* than in later periods.¹⁸ The Icelandic settlers of Greenland likewise relied on the ‘wet and wild’ resources far more than domesticates. McGovern’s analysis of faunal remains from fourteen Greenland settlements found a majority of wild animals, with only two sites revealing greater reliance upon domesticates than hunted resources.¹⁹ It is tempting to focus on these exciting years of settlement of the North Atlantic islands, when hunted and scavenged resources must have been essential as farms were established. However, important periods of scavenging occur in later years of settlement as well, once ecosystems began to show the strains of human exploitation. Ecological decline as a result of human interference was seen nowhere more clearly than in Iceland.

[The] *landnám* process soon had powerful impacts on the local resources, which in these northern regions were easily perturbed and adversely affected by human agency. Within a decade, the local forests—marginal by mainland standards in any case—had been decimated for wood and fuel. Analysis of pollen preserved in peat deposits and lake sediments record sudden changes in vegetation within decades of *landnám* in all regions. Animals were even more destructive than people in changing local vegetation and ultimately whole landscapes, reducing forest and shrublands to grasslands, and through time, by overgrazing, converting grasslands to wastelands. These ecological stresses grew more difficult to manage in the harsher climates to the northwest and accumulated over time, more rapidly as the climate deteriorated generally after 1350.²⁰

A reliance on maritime resources in the North Atlantic, particularly in the later years of settlement, is confirmed in archaeological evidence from across the Northern world, most profoundly from Greenland. Studies by Lynnerup and Arneborg reveal intensified reliance upon marine proteins throughout the duration of Norse settlement in Greenland.²¹ By measuring the stable carbon isotopic composition ($\delta^{13}\text{C}$) of bone collagen samples from Norse burials, osteoarchaeologists

¹⁸ Fitzhugh, 2000, 19.

¹⁹ J. Arneborg, “Norse Greenland: Reflections on Settlement and Depopulation,” in *Contact, Continuity, and Collapse: The Norse Colonization of the North Atlantic*, ed. J. Barrett, 169 (Turnhout, Belgium: Brepols Publishers, 2003).

²⁰ Fitzhugh, 2000, 19.

²¹ For more complete explanations of process, samples and conclusions, see N. Lynnerup and N. Von Wöhrn, “Bone Mineral Content in Medieval Greenland Norse,” *International Journal of Osteoarchaeology* 7 (1997): 235–240; J. Arneborg, et al., “Change of diet of the Greenland Vikings determined from stable carbon isotope analysis and ¹⁴C dating of their bones,” *Radiocarbon* 41, no. 2 (1999): 157–168.

are able to estimate the relative proportion of marine and terrestrial proteins consumed by individuals within the last ± 10 years of life. The Greenland Norse reliance on marine products only increased when these populations endured changing climatic conditions as the so-called Medieval Warm Period came to an end: “the Norse probably shifted their main dietary reliance from terrestrial (farm animals and game) to marine foodstuffs.”²² Arneborg concludes that over the duration of the Norse settlement in Greenland, the marine reliance shifted from 20% to 80% marine, derived mostly from seals, but also fish and other marine mammals.²³ The use of marine resources among Greenland colonists was much higher than that seen in Norway or other Norse colonies, as evidenced by comparative analysis of Norse remains from the churchyard at Eric the Red’s farm at Brattahlíð. “The human bones from Brattahlíð were 20–50% marine. This scatter could be explained either by social differences in subsistence or by new immigration. Thus, low values are expected for people newly arrived from Iceland or Norway with a more terrestrial $\delta^{13}\text{C}$ imprinted in their bones.”²⁴ Remains of high-status individuals, such as a bishop identified in the church ruins at Igaliku, Greenland, were also characterized by a higher terrestrial protein content: “The bones of the bishop were only 25% marine, perhaps indicating that he had arrived a short time before from Norway where all the bishops of Greenland originated. The low marine content of the bishop’s food could also be explained by his high social status, presumably allowing access to beef and game.”²⁵

Barrett and Richards’ analysis of Orkney’s marine resource intensification, focusing more on fish than marine mammals, goes further than earlier studies in seeking the cause of dietary shifts or choices beyond simple economic or environmental necessity. According to Barrett and Richards, status and social identity were more central than hitherto appreciated in peoples’ decisions to use marine or terrestrial resources.²⁶ The Pictish, or pre-Viking, burials at Westness cemetery on Rousay, Orkney, revealed only modest reliance upon marine proteins, a striking and counterintuitive conclusion, given “their maritime

²² Lynnerup and Von Wöhrn, 235.

²³ Arneborg et al., 165.

²⁴ Arneborg et al., 163.

²⁵ Arneborg et al., 164.

²⁶ James H. Barrett and Michael P. Richards, “Identity, gender, religion and economy: new isotope and radiocarbon evidence for marine resource intensification in early historic Orkney, Scotland, UK,” *European Journal of Archaeology* 7.3 (2004): 260.

environment, on an island of approximately 10 km in length....”²⁷ The avoidance of marine resources, while not complete, was deliberate: “[T]hese individuals clearly chose to base their subsistence strategy predominantly on arable and pastoral farming. The sea was not even used for fodder, as a marine signal would be passed up the food chain via livestock.”²⁸ The subtle analysis of pre-Viking and Viking Age graves revealed a widely varying use of marine resources that seemed to reflect individual choices as dictated by a host of factors. Consumption of marine products, as seen in the bishop’s grave at Igaliku and in numerous burials in Orkney, varied not only by period but by social status, gender, religion and occupation.²⁹

What is most striking about the conclusions of these genetic analyses is the prominence of choice and cultural tastes among the North Atlantic populations. Whereas maritime resources are a logical expectation for the historian and archaeologist as staples within the diets of North Atlantic islanders, premodern populations were not constrained by their geographical circumstance. Just because these populations were islanders does not mean they were restricted to a maritime diet. The relative proportion of whales to seals or fish is not articulated in these studies, although zooarchaeological evidence most frequently reveals a greater reliance upon fish and, in some locations, seals. Archaeological evidence remains imperfect in providing estimates of whale meat use from bone analysis on sites, since whale butchery necessarily was a coastal activity and butchery of other animals was more typically done on site. It remains to be seen how much whales contributed to the subsistence of these earliest North Atlantic settlements.



The complexity of cetaceans, as they were perceived, described and used, was nowhere more pronounced in the Middle Ages than in the northern world. The northern oceans were home to over two dozen species of whales, ranging from the diminutive Harbor porpoise to the massive Blue whale. The North Atlantic is not technically the subject of

²⁷ Barrett and Richards, 260.

²⁸ Barrett and Richards, 260.

²⁹ Barrett and Richards, 264–265.

this study, but rather the northwest North Atlantic, the region between parallels 50°–70°, where the Norse wrought their greatest influence during the Middle Ages.³⁰ The White, Barents, Norwegian, Greenland, Baltic and North Seas, the waters surrounding Great Britain (Irish Sea, Celtic Sea and the English Channel), in addition to the open waters of the northern North Atlantic, are the bodies of water associated with and surrounding the Norse North Atlantic colonies (Map 4). Further north, the southern Arctic Ocean falls within the Norse cultural region, and to the far west we also must consider the Labrador Sea and the Davis Strait, where the Norse sailed and engaged in limited settlement by the tenth century. Any waters further to the south along the North American continent must remain of speculative importance to the Norse, although the Gulf of Saint Lawrence and the Grand Banks fall within easy reach of L'Anse aux Meadows, the only known Viking Age settlement of North America.

The cliché that waters were highways more than barriers in the Middle Ages is of course true of the North Atlantic of the early and high Middle Ages. By the late Middle Ages, portions of that highway became at times impassable with the formation of drift and pack ice, caused by a colder climatic shift, but the seas were rarely a barrier to the Norse.³¹ Fed by the Gulf Stream Current and rich with abundant food sources found at the boundaries of warm and cold waters, the northern seas were ensured a steady whale population year-round, with annual returns of migratory species across the north. Therefore, the frequency of and familiarity with whales in North Atlantic histories, laws, literature and archaeology is hardly surprising. This knowledge of whales is made resoundingly clear by considering the lexicon of the

³⁰ Any territorial definition of the Norse North Atlantic region is an artificial construction, more historical than necessarily or logically geographical. For the purposes of this study, breadth is favored for inclusion of Arctic territories where the northernmost fisher-hunters, such as Ottar, may have traveled for resources. Other authors have defined the North Atlantic by different parameters. Mills and Coles, for example, choose 50°–65°, while many authors choose to eschew territorial definition altogether. M. Mills and G. Coles, eds., *Life on the Edge: Human Settlement and Marginality*. Oxbow Monograph 100 (Oxford: Oxbow Books, 1998).

³¹ Many debate the value of the term 'Little Ice Age,' for it implies a monolithic period of uniform climate change, which we know was not the case temporally or spatially across Europe. But, in the Northern North Atlantic, a dramatic cold period did indeed occur, making the relevance of this term apparent, at least in this locale.

medieval Norse with over two dozen whale-words.³² North Atlantic ecology and settlement patterns necessitated a thorough knowledge of whales among northern peoples.

The island cultures of these North Atlantic waters are described as having "...a common cultural heritage which unites them and to some extent distinguishes them from other nations but does not make them identical."³³ For most of the North Atlantic islands and archipelagos, Norway was the wellspring from whence a common cultural heritage was derived (Map 1). Orkney, Shetland, the Faroe Islands, Iceland, Greenland and the Norse settlement of Newfoundland, while ethnically heterogeneous and drawing populations from across the Scandinavian world, were dominated by an elite that originated in Norway. These territories became part of a greater cultural continuum across the North Atlantic, sharing cultural traditions, economies and oftentimes social and political systems. These territories also demonstrated a shared set of settlement traditions, forged in the geography and ecology of the Norse homeland itself. Western Norway, by geographical necessity, was dominated by, but not limited to, coastal settlement along fjords and coastlines with dispersed farmsteads utilizing the minimal agricultural land that Norway had to offer in the Middle Ages.³⁴ Because nearly one-third of Norway lies within the Arctic Circle, diverse subsistence strategies were necessary. The Norse developed a subsistence strategy reliant upon both the products of sea and land, more so than their Swedish and Danish neighbors to the south and east, but less than their Arctic Saami neighbors to the north. The degree to which the early Norse relied on maritime products remains unclear: "Even determining the relative importance of fishing, sea-mammal hunting, and bird

³² C. Fell, "Some questions of language," in *Two Voyagers at the Court of King Alfred: The Ventures of Ohthere and Wulfstan together with the Description of Northern Europe from the Old English Orosius*, ed. N. Lund, trans. Christine Fell, 58 (York: William Sessions Limited, 1984).

³³ E. Haugen, "Semicommunication: The language gap in Scandinavia," in *Explorations in sociolinguistics*, ed. S. Lieberman, 153 (Bloomington: Mouton, 1966).

³⁴ With over 12,000 miles of coastline, and only 3% arable land, Norwegians adapted to exploitation of maritime resources from the earliest settlements; the Saami of Arctic Norway, in particular, were supremely adapted to exploit the wild terrestrial and marine resources. See N. Price, "The Scandinavian Landscape: People and Environment," and S. Kalland and I. Martens, "Farming and Daily Life," in *Vikings: The North Atlantic Saga*, eds. W. Fitzhugh and E. Ward, 31–41; 42–54 (Washington DC: Smithsonian Institution Press, 2000).

catching from archaeological data alone is difficult.”³⁵ However, only a thorough exploitation strategy would allow a sizeable population to exist in premodern Norway.³⁶ Their subsistence strategies were more than simply successful, as complex societies developed from the Iron Age into the Early Middle Ages: “[We] must conclude that the Norwegians did not suffer hardship. Like other Scandinavian countries Norway could clearly support a military class that was able to extract enough surplus from the land to invest in sophisticated arms, maintain central armories, train large armies and develop a sophisticated hierarchical society as early as the third century AD.”³⁷ These adaptations to life in Norway served the Norse well as they traversed the North Atlantic islands, encountering many different species of whales during their voyages.

Approximately twenty-eight species of cetaceans are thought to inhabit the waters of the Norse cultural region of the North Atlantic.³⁸ Whales, dolphins and porpoise belong to the Class *Mammalia*, Order *Cetacea*, with two remarkably varied suborders, namely *Odontocete*, the toothed whales and *Mysticete*, the baleen whales. *Mysticete* are divided into two families, *Balaenidae* and *Balaenopteridae*, while *Odontocete* branch into eight families, including *Delphinidae*, *Monodontidae*, *Phocoenidae*, *Physeteridae*, and *Ziphiidae*. The Atlantic Grey whale, of suborder *Mysticete*, family *Eschrichtiidae*, was apparently hunted during the era of Norse settlement and expansion, but became extinct by the eighteenth century.³⁹ One of the greatest difficulties in assessing medieval whale use is our ignorance of whales, their populations and behaviors as they exist today. Without

³⁵ Price, 46.

³⁶ Price estimates the Scandinavian population of the first millennium AD to be no greater than “a few hundred thousand,” although he does not estimate the population of coastal Norway alone (37).

³⁷ A. Forte, R. Oram, and F. Pedersen, *Viking Empires* (New York: Cambridge University, 2005), 11–12.

³⁸ See appendix for the cetaceans found in the Northern North Atlantic and its ancillary seas.

³⁹ Some museum’s comparative collections possess the Pacific Grey Whale, but few have secure examples of the Atlantic Grey whale. The morphological differences between Atlantic and Pacific Grey whales are thought to be minimal. P. J. Bryant contends that “no difference has been found between individuals of Atlantic and Pacific Ocean populations of gray whale that would justify separating them into two species or even subspecies” (857). Archaeological identification of Grey whales can be somewhat problematic due to the absence of Grey skeletons in European zoological collections. P. J. Bryant, “Dating Remains of Gray Whales from the Eastern North Atlantic,” *Journal of Mammalogy* 76.3 (1995): 857–861.

this baseline knowledge, we cannot fully recognize changes in the archaeological record.⁴⁰

The absence of Grey whales in the modern North Atlantic exemplifies a problem in the reconstruction of ancient whale populations, namely human influence on whale populations, an influence that ends but does not begin with extinction.⁴¹ Over the course of the past millennium, humans have wrought great influence on a number of species beyond their endangerment or extinction, as hunting and change of habitat has resulted in anthropogenic change of some species. Anthropogenic evolution, the process by which species change through artificial selection, has led to dramatic changes in some whale populations as the largest individuals of some species have been hunted and removed from the breeding population.⁴² Observation of comparative zoological collections of cetacean bone immediately reveals the impact of anthropogenesis, as massive whale skeletons collected in the nineteenth century dwarf modern specimens. Whales that large simply do not exist today. More obvious impacts of hunting, though, are evident in whale populations. Each side in the modern whaling debate cites its own cetacean demographics, making estimations of current populations inconsistent if not incorrect, although current estimates hold that somewhere around two and a half million large whales were killed by industrial whalers over the past four centuries. Ancient populations prior to industrial whaling are thought to be ten to twenty times higher than modern populations. One study estimated that Fin whales, one of the most valued species in the Norse sagas and laws could have numbered as high as 360,000 individuals, although the modern population is estimated at 56,000 individuals.⁴³

⁴⁰ The species listed in the appendix are included because they occur in the North Atlantic today or because they skirt the boundaries of the North Atlantic as defined in this study.

⁴¹ W. Wolff, "The south-eastern North Sea: losses of vertebrate fauna during the past 2000 years," *Biological Conservation* 95 (2000): 209–217.

⁴² E. Russell, "Evolutionary History: Prospectus for a new field," *Environmental History* 8 (April 2003): 204–228. In a recent example, biologists have noted an overall decline in the size of whale sharks off the coast of Australia. "In a decade, the average size has shrunk from seven metres to five metres." R. Black, "World's biggest fish 'shrinking'," *BBC News Online* <http://news.bbc.co.uk/2/hi/science/nature/4620960.stm> (accessed 17 July 2005).

⁴³ J. Roman and S. Palumbi, "Whales before Whaling in the North Atlantic," *Science* 301 (25 July 2003): 508; C. S. Baker and P. J. Clapham, "Modelling the past and future of whales and whaling," *Trends in Ecology and Evolution* 19, no. 7 (July 2004): 365–371.

The complications of human interference with whale populations are legion. One result of this change is that archaeologists can have difficulty identifying ancient whale bones by morphology, given the differences between individuals in modern comparative collections and ancient populations.⁴⁴ Likewise, medieval textual descriptions of whales aren't always congruent with modern species. Furthermore, it is difficult to appreciate much less estimate the impact of higher populations on whale behavior, disease and strandings, although such considerations must be made in attempts to reconstruct the role of whales in ancient economies. The challenges do not end there. Some changes to whale populations and behaviors were caused by forces even greater than human interference.

Climate change must also be considered for its impact on the ancient seas and their animal and human populations.⁴⁵ In reconstructing North Atlantic whale populations of past millennia, the ancient climate must be considered an important factor of change, as the oceans and seas have varied in temperature, salinity, deep water circulation and current.⁴⁶ Several of the cetacean species included in the appendix are rarely sighted north of 40°N today, thus well outside the area reconstructed as the Norse North Atlantic, but they may have had a greater range a millennium ago during the climatic optimum called

⁴⁴ While morphology can be an imprecise means of whale identification, increasingly success has been found using genetic analysis. T. Rastogi et al. "Genetic analysis of 16th-century whale bones prompts a revision of the impact of Basque whaling on right and bowhead whales in the western North Atlantic," *Canadian Journal of Zoology* 82 (2004): 1647–1654.

⁴⁵ Fortunately, our knowledge of the Norse North Atlantic ecosystem is extensive, largely due to extensive study of Greenland ice cores and palaeoecological analyses by members of the North Atlantic Biocultural Organization (NABO) study groups. T. Amorosi, "Climate Impact and Human Response in Northeast Iceland: Archaeological Investigations at Svalbard," in *Norse and Later Settlement and Subsistence in the North Atlantic*, edited by Christopher D. Morris and D. James Rackham, 103–138 (Glasgow: University of Glasgow, 1992); P. Buckland, et al., "Bioarchaeological and climatological evidence for the fate of Norse farmers in medieval Greenland," *Antiquity* 70 (1996): 88–96; P. Mayewski et al. "Changes in atmospheric circulation and ocean ice cover over the North Atlantic during the last 41,000 years," *Science* 263, no. 5154 (March 25, 1994): 1747–1751; A. Ogilvie, "Climatic Changes in Iceland, AD c. 865 to 1598," *Acta Archaeologica* 61 (1991): 233–251; A. Ogilvie, *Climate and Society in Iceland from the Medieval period to the late Eighteenth Century* (Ph.D. diss., University of East Anglia, 1981).

⁴⁶ H. C. Hass, "Northern Europe climate variations during late Holocene: evidence from marine Skagerrak," *Palaeogeography, Palaeoclimatology, Palaeoecology* 123 (1996): 121–145.

the Medieval Warm Period.⁴⁷ The Medieval Warm Period, ca. AD 1080–1350, but varying throughout Europe from AD 800–1500, and the Little Ice Age, ca. AD 1350–1550, should not be taken as absolute shifts in climate, but rather broad characterizations when the climate tended respectively towards warmer and drier versus cooler and wetter periods.⁴⁸ Each of these major periods included shorter internal phases of climatic fluctuation.

The Medieval Warm Period not only saw increased air temperatures, milder winters and warmer summers, but an increase of 1–4 K in sea-surface temperatures across the North Atlantic.⁴⁹ The Warm Period corresponds with the onset of the Viking Age and the emigration of tens of thousands of Norsemen and other Scandinavians to Iceland and beyond. Over the course of the Medieval Warm Period, the increased North Atlantic temperatures may have drawn subtropical cetacean species further north.⁵⁰ Within this long climatic optimum, though, cooler phases occurred. According to the Greenland ice cores, dendrochronology and analysis of glacial advance, cold phases occurred from AD 800–850 in Greenland, 800–900 in northern Sweden, and 1030–1220 in Norway. Regional variations during the Warm Period would have allowed or necessitated different short-term subsistence strategies.

The onset of the Little Ice Age likewise would have brought about new challenges to North Atlantic peoples who had only known Iceland, Greenland, the Faroes and Newfoundland during the Warm Period. The climatic changes were profound, possibly calamitous for some Norse Atlantic populations:

[The] polar climate zone expanded dramatically (up to 10°) to the south... [The] East Greenland Current and its branch the East Iceland

⁴⁷ A. Ogilvie and T. Jónsson, "Little Ice Age' Research: A Perspective from Iceland," *Climatic Change* 48 (2001): 9–52.

⁴⁸ J. M. Grove, "The Initiation of the 'Little Ice Age' in Regions Round the North Atlantic," *Climatic Change* 48 (2001): 53–82. Much debate surrounds the use of these terms and their adequacy in describing climatic change, for they intimate massive climatic events rather than more subtle shifts that varied both geographically and temporally.

⁴⁹ Hass, citing Lamb 1977. Kelvin (K) temperature variations are approximate in plus/minus change to Celsius scale change.

⁵⁰ At the same time, Arctic species may have retreated to the north as well. Furthermore, storm activity would have decreased, and other species would likewise have reacted to the long-term climate changes. The entire resource base of the North Atlantic may have been impacted in subtle yet significant ways.

Current were amplified whereby the SST (sea surface temperature) around Iceland dropped by 5 K...and in the North Atlantic by 2–3 K below today's average. Concurrently an enormous extension of the sea ice cover occurred in the Greenland Sea.... With dropping air temperatures...and sea temperatures through the advance of polar air and water masses, the gradients of the oceanic and atmospheric fronts increased...resulting in anomalous atmospheric circulation patterns and frequent severe storms.⁵¹

The onset of the Little Ice Age may have begun earlier in the North Atlantic than elsewhere in Europe. Documentary and environmental evidence indicates an increase in snowfall, permafrost and glacial advance in Greenland by the 1270s and Iceland as early as the late twelfth or early thirteenth century.⁵² What this evidence means for a history of whaling is twofold. First, the whales themselves will have adapted to changing environmental conditions, including responses to changes in habitat, food and perhaps populations. Second, humans also adapted to changing conditions of the same types, but especially habitat and resources. Two populations, humans and whales, faced similar constraints and these two populations came together as humans exploited all resources at their disposal. Whales may have become more valuable during the era of climatic shift.⁵³

The North Atlantic is a complex maritime environment, warmed by the Gulf Stream and its offshoots, and cooled by a number of cold Arctic currents. The cold northern North Atlantic waters, fed by warmer southern currents, are filled with the favored foods of many species of toothed and baleen whales. Cetaceans, like all creatures terrestrial and marine, follow resources. In the great oceans, resources such as plankton, krill and other small biota, are found in greatest concentrations along current boundaries or thermoclines, where warmer and colder waters meet. Upwellings, where these deep currents and shelves collide, produce

⁵¹ Hass, citing Lamb, Schell, Fairbridge, 137.

⁵² Grove, 65–66. Notably, the Golden Age of saga writing occurs at the same time as this climatic shift. Whether this has any relevance on saga depictions of whale use is difficult to determine.

⁵³ It must be noted that the greatest pressure on all Norse settlements seems to have occurred in Greenland, where the settlement apparently was lost by the late fifteenth century. It has traditionally been argued that the Greenland Norse would not adopt the subsistence strategies of newly arrived Inuit groups, which included more intensive whaling and sealing.

rich feeding areas as cold depth waters are forced to the surface.⁵⁴ Iceland was at the center of this complex ecological interface: "Iceland is situated at a meeting point for cold air from the polar regions and warmer air from the Atlantic. The surrounding seas are driven by two principal contrasting currents; the warm Irminger current and the cold East Greenland current."⁵⁵

Regardless of the precise climatic conditions which prevailed in any given century, one constant of the North Atlantic was a steady whale population comprised of many species, large and small. Many species of *Odontocete* remain year-round in the cold waters of the North Atlantic, while others, especially *Mysticete*, migrate to warmer southern waters for breeding and calving. The North Atlantic, while rich in resources both for human and animals, is an unsuitable location for the birthing of whale calves. Many of the great whales, including Humpbacks and Blue whales give birth in the warmer waters of the southern North Atlantic and then return with their young to the rich northern feeding grounds in the summer months. Thus, some cetaceans were a year-round resource for North Atlantic peoples, while others followed predictable patterns of migration to and from the North Atlantic. The return of whales and calves to the North Atlantic in the springtime and early summer must have been a period of anticipation for some Norse communities, as calves were, according to some authors visiting the Norse North Atlantic, an attractive prey for northern hunters.

North Atlantic ecology ensured that Norse travelers and North Atlantic settlers came into constant contact with marine mammals both at sea and on shore from the earliest days of colonization. At certain times of the year, and at certain locations, Norsemen knew where whales could be found. Those willing to invest time, effort, and a strong stomach in their butchery could reap massive rewards. Once whales were found, their utility was unparalleled by most creatures in the North Atlantic ecosystem.



⁵⁴ C. C. Kinze, *Marine Mammals of the North Atlantic*, trans. D. A. Christie (Princeton: Princeton University Press, 2001), 16–17.

⁵⁵ A. Ogilvie, "Climatic Changes in Iceland, AD c. 865 to 1598," *Acta Archaeologica* 61 (1991): 233.

Both history and ethnography reveal the innumerable uses of whale products in the ancient and modern North Atlantic, from flesh to bone to blubber to waste. The preeminent utility of whales, large or small, young or old, naturally was their provision of protein rich meat. Whale meat resembles the flesh of other mammals, a deep, red meat more like beef than fish. According to medieval Church law, whale meat was classified as a ‘cold’ food, because it came from the water, so like fish, it could be consumed on Fridays and holy days.⁵⁶ The Basques were among the first to tap into this holy loophole by hunting whales and selling “fresh and salted whale meat as ‘cold’ flesh for holy days as far afield as London and Paris.”⁵⁷ The popularity of whale on Fridays and holy days is attested to in the *King’s Mirror*: “...whale flesh may be eaten on fast days like other fish food...”⁵⁸ The *Grágás* laws confirm the legality of whale flesh on holy days in medieval Iceland: “He may...eat this when he fasts: fish of all kinds and whales other than walrus and seal—these may only be eaten when meat may be eaten.”⁵⁹ Whether Church dogma was obeyed or flouted, whale meat was a popular source of flesh food, fresh, salted or dried. Whale meat was not only acquired for personal consumption, but also for commercial profit. Several Icelandic sagas depict the sale of whale meat, including *Ljósvetninga saga* and *Eyrbyggja saga*, and whale meat was also a popular product at continental markets, found in the eleventh-century markets at Arras and Boulogne and throughout Flanders.⁶⁰ The popularity of whale meat as a licit cold flesh would make whales an important commodity throughout the Middle Ages.

Whales must have been sought out, deliberately or opportunistically, at certain times of the year to meet this demand for cold flesh, and

⁵⁶ B. Fagan, *The Little Ice Age: How the Climate Made History, 1300–1850* (New York: Basic Books, 2000), 69.

⁵⁷ Fagan, 71.

⁵⁸ *The King’s Mirror (Speculum Regale—Konungs Skuggsjá)*, trans. by Laurence Marcellus Larson (New York: Twayne Publishers, Inc., and The American-Scandinavian Foundation, 1917), XVI, 141.

⁵⁹ *Laws of Early Iceland: Grágás: The Codex Regius of Grágás with Material from Other Manuscripts. Vol. II.* trans. by Andrew Dennis, Peter Foote and Richard Perkins (Winnipeg, Canada: University of Manitoba Press, 2000), K 17; 50.

⁶⁰ W. M. A. De Smet, “Evidence of Whaling in the North Sea and English Channel During the Middle Ages,” in *Mammals in the Seas*, Food and Agriculture Organization of the United Nations, FAO Fisheries Series No. 5, Vol. III, 305–306 (Rome: FAO Advisory Committee on Marine Resources Research Working Party on Marine Mammals, 1981); J. T. Jenkins, *A History of the Whale Fisheries* (London: H. F. & G. Witherby, 1921), 60; R. Latouche, *The Birth of the Western Economy* (New York: Methuen, 1961), 243.

depending on the species, tons of meat could be had from any single animal. The majority of a whale's weight is made up of its valued meat and blubber rather than bones. "Because whales live floating in water, their bones do not have to support the weight of their bodies. For this reason, their bones comprise a smaller proportion and their muscles comprise a larger proportion of their body weight than in the land mammals."⁶¹ The weight of the Blue whale is 40% muscle and only 17% bone, with the balance of the weight made up by organs, skin, and especially blubber. It is no wonder that the sagas obsess the over the *reyður*, the Blue or Fin whale, as the most sought after stranded whale. The quantity of meat provided by whales is massive, so much that the largest whales could only be fruitfully exploited by whole communities.

With a weight of greater than 25 tons for the Sperm whale, around 40 tons for the Humpback whale and over 60 tons for the Right whale we can get an idea of the amount of food available from these animals for coastal dwellers. Due to the geometry of surface-to-volume ratios of cetaceans the percentage of meat increases with size, whereas the blubber or oil-bearing fat decreases. Common porpoises (average wt 41 kg) show 45 per cent blubber to 25 per cent meat, while Fin whales (average wt 45 tons) have 25 per cent blubber and 45 per cent meat.... This means a large whale, such as a Southern Right whale, offers around 30 tons of meat, while a False Killer whale will give approximately 1/2 ton.⁶²

With so much meat to be had from some species, preservation must have been a key concern of those communities who harvested stranded or shot whales.

Texts allude to the preparation of whale meat by the Norse, who both salted and boiled the flesh.⁶³ It is possible that the means of cooking a whale depended on the way that the whale was acquired. Cetaceans caught alive at sea may have been considered safe enough to consume raw or salted, whereas whales which came ashore dead or dying were cooked or boiled to ensure their edibility and to eliminate oils or excreted materials which may have tainted the meat. It could also be the case that methods of meat preparation were subject to taste

⁶¹ S. W. Tinker, *Whales of the World* (New York: E. J. Brill, 1988), 53.

⁶² Andrew B. Smith and John Kinahan, "The Invisible Whale," *World Archaeology* 16 (1984): 95.

⁶³ *Vinland Sagas: Grœlendinga Saga and Eirík's Saga*, ed. and trans. by Magnus Magnusson and Hermann Pálsson (New York: Penguin Books USA Inc., 1965).

and regional preference rather than issues of purity or contamination. Olaus Magnus, who has much to say on the uses of whale meat and soft tissues by sixteenth-century Norwegians, made no distinction between captured and stranded whales in the preparation of meat:

When sea-monsters or whales have been hauled out of the sea...the people of the neighborhood divide the booty...in such a way that with the meat, blubber, and bones of a single whale or monster they can fill between 250 and 300 carts. After they have put the meat and fat into vast numbers of large barrels, they preserve it in salt, as they do other huge sea-fish. They use it for home consumption...or sell it to others who will export it to distant lands for the same purposes....⁶⁴

In this account both meat and blubber are described as salted and preserved, although later Olaus refers to the large store of blubber, implying that the blubber is rendered rather than eaten.

Clearly, however, not every stranded whale was fit to be salted, as Olaus reports in an eyewitness account of a whale stranding in Britain: "In the month of August 1532, our seas cast upon the shores [of northern England] a dead beast of a vast magnitude...I came thither the 27 of August, when this beast stank that we could scarce endure it."⁶⁵ While portions were carted away, the author does not state whether these shares were for consumption. Preparation and use could also be affected by the type of whale being cooked. Certain whales are described in the *King's Mirror*, in Albertus Magnus' *De Animalibus* and in Olaus Magnus' *Historia* as too oily or smelly to cook and eat. The demon whales of the *Physiologus* and medieval bestiaries were surely within this inedible category of monstrous whales.

While the use of meat is discussed with relative frequency, descriptions of whale butchery are wanting. The sagas are notoriously vague, often simply acknowledging that stranded whales were butchered and products removed from the stranding site. "Then Thorvald went there with his men and had the whale cut and moved to his home, dividing some of the whale among his men."⁶⁶ This reference from the *Saga of Hrafn*

⁶⁴ Olaus Magnus *Historia de Gentibus Septentrionalibus Romae 1555*, ed. by Peter Foote, trans. by Peter Fisher and Humphrey Higgins (London: The Hakluyt Society, 1996), XXI, xx.

⁶⁵ Olaus Magnus, XXI, ix.

⁶⁶ *The Saga of Hrafn Sveinbjarnarson*, trans. A. Tjomsland. *Islandica XXXV* (Ithaca, NY: Cornell University Press, 1951), 43.

Sveinbjarnarson is one of the more detailed statements on butchery. We cannot, however, determine from the saga how big the whale was or how it was butchered, whether it was simply field butchered to remove offal, fins and byproducts, or whether the meat was properly stripped and divided. Historical accounts from medieval Britain and Scandinavia indicate that large whales usually required five to six days to be entirely butchered, or at least butchered to its greatest usable extent.⁶⁷ It must be remembered that most whales were likely scavenged from the shoreline and may have been ill or dead for days prior to butchery. Butchery, in short, was neither safe nor easy. The state of the dead whale through such a long period of time and its subsequent freshness for consumption is surely questionable.

Just as ethnographic evidence is important in understanding how whales may have been acquired, it also aids in reconstructing how large whales may have been butchered and used. Large pods of small cetaceans can require many hours if not days to butcher when stranded in great quantities, but great whales, alone or as a pod, could take much longer to process:

...a 20 m Bowhead caught at Wainwright took the entire village of about 300 people four days to butcher. Eric Loring...relates that an 18 m Bowhead killed at Wainwright in the late 1980s required Eskimos about 18 hours of very hard work to tow the carcass to the ice edge. Further, it took an entire day to haul it onto the ice, and another 16 hours to butcher it. By then, the meat had spoiled, although the [blubber] was still usable.⁶⁸

These staggering statistics of modern butchery show the labor, human investment, and time required to fully utilize available resources from one whale. These examples also describe situations in which the whales are not left to drift to shore, but rather have been hunted and returned to shore by the whalers. When large whales are temporarily lost to the tide or when a whale briefly sinks and resurfaces days later, bloated with gasses of decay, the butchering process is not only lengthy but also extremely disagreeable. Waterman, in his 1920 publication on the whaling equipment of the Makah, records the fascinating unpleasantness

⁶⁷ Lindquist, 1995, 28.

⁶⁸ A. P. McCartney, "History of native whaling in the Arctic and Subarctic," in *Arctic Whaling: Proceedings of the International symposium Arctic Whaling, February 1983*, eds. H. K. s' Jacob, K. Snoeiijing, R. Vaughan, 98 (Groningen: University of Groningen, 1983).

of the butchery of decomposing whales. Waterman's account explains the factors behind the whale's decomposition, but also the effects of this decomposition upon the unfortunate men responsible for the butchery:

The stomach of the [whale] when he is killed usually contains from one to two tons of half-digested fish. This material begins to decay almost at once, and the carcass soon begins to be bloated, from the gases which accumulate. If two days are consumed in getting to the land, the tongue begins to protrude, the carcass 'floats high' in the water, and the whale stinks desperately. It is the intestines that give rise to this odor, however, and not the blubber. Even a perfectly fresh whale stinks when he is opened. It is said that the man who first opens the carcass on the beach is sometimes overcome by the gases, which burst out, and 'cause him to faint'. The process of decay goes on much more rapidly in the flesh than in the blubber, which keeps for an indefinite period, even if not removed from the whale.⁶⁹

Large, dead whales, including most Mysticete and especially Sperm whales, build up great internal gas pressures as their internal body heat rises with decay. This is one reason why Right whales were so named. They were the 'right' whales to hunt because they floated at death from the build-up of internal gasses. But this build-up of internal pressure was not always a boon. One wrong swipe of a butchering knife could puncture the gas-filled organs, causing no less than a massive explosion. The Norwegian *Gulathing* law specifically cites the caution necessary when butchering floating whales at sea: "If a man comes upon a whale out on a fishing ground, let him cut off what he can, only not through the walls [of the visceral cavity], and let the carcass drift."⁷⁰ One foul swipe could cause the loss of the whale for other fishermen.

When a massive whale strands, tons of resources must be quickly stripped from the carcass to prevent the spoilage just described. But a large whale, or a pod of whales, could provide more meat than could be consumed or even butchered before it would invariably spoil. Edible meat and blubber, generally salted, wind-dried or rendered, could be stored in underground storage pits or caches and saved for later use. In the high Arctic, whale meat could also be frozen, although it was likely

⁶⁹ T. T. Waterman, *The Whaling Equipment of the Makah Indians* (Seattle: University of Washington Publications, 1920), 46.

⁷⁰ *The Earliest Norwegian Laws; Being the Gulathing Law and the Frostathing Law*, trans. by Laurence M. Larson (New York: Columbia University Press, 1935), 150.

cured prior to storage.⁷¹ Even when whales had decomposed and were extraordinarily unpleasant, resources could still be had. The most rotten and rancid whales could be used fuel or equipment oil. Such applications of blubber and oil were clearly appreciated by later medieval authors, who may have been aware of the growth of whaling industries for this very application by the high and later Middle Ages. Olaus Magnus described typical domestic uses of whale oil: "The advantage of this rich substance is that, poured into lamps and constantly replenished, it can supply unfailing light for altars and other holy places, night and day. It is also much devoted to private and domestic purposes, since there is no daylight in those parts during winter."⁷² Blubber was also used as a treatment for ship planks and ropes: "They smear [blubber] on the outside of ships' timbers, so that in a rough, or rather very severe, winter, the ice-cold waters do not freeze hard round their boats and sink them, for it prevents the water from turning to ice."⁷³

The uses of skin, waste and sinew are perhaps less obvious than those of flesh and blubber. Whale skin consists of four layers which can account for nearly one-third of the body weight of some cetaceans.⁷⁴ The epidermis and dermis, the outer two layers of skin, measure only five to ten millimeters in thickness. Because these layers are so thin, their utility is limited, although historical and ethnographic reports recount various uses. The third layer, the hypodermis, comprises the blubber layer, for which whales have been so actively sought over the centuries. The first layers serve merely as a covering to protect the important blubber, which is responsible for temperature regulation. In some species, this blubber layer grows up to 60 centimeters thick, serving as a fat store for whales, enabling them to undertake long migrations, and serving as necessary insulation for life within frigid Arctic climates. Reconstruction of the use of whale soft tissues largely is dependent on historical reference and ethnographic analogy rather than any material evidence. According to Annandale, the stomachs

⁷¹ A. Savelle and A. P. McCartney, "Prehistoric Thule Eskimo Whaling in the Canadian Arctic Islands: Current Knowledge and Future Research Directions," in *Canada's Missing Dimension: Science and History in the Canadian Arctic Islands*, vol. II, ed. C. R. Harrington, 703 (Ottawa: Canadian Museum of Nature, 1990). Some massive caches stored meat and blubber from fifteen to twenty-five whales.

⁷² Olaus Magnus, XXI, xx.

⁷³ Olaus Magnus, XXI, xxi.

⁷⁴ James Savelle and T. Max Friesen, "An Odotocete (Cetacea) Meat Utility Index," *Journal of Archaeological Science* 23 (1996): 715.

of Pilot whales were frequently used as floats for fishing nets.⁷⁵ Olaus Magnus described many uses of whale skin in Arctic Norway: "...from whale-skin are made belts, purses, and ropes for pulling church bells, all long-lasting."⁷⁶ Olaus also states that whale skin was used as a type of gate or doorway in houses constructed of whale bones: "The doors are made from the creature's hide, which has long since been stripped off for this or some different purpose and hardened by the rough winds."⁷⁷

Skin, blubber and meat perhaps are obvious as useful resources from whales, but other resources were also valued. Two unique products of the Sperm whale were sought after during antiquity and the Middle Ages, namely ambergris and spermaceti. The terminology used to describe these products is at times ambiguous in medieval sources, as spermaceti and ambergris are used interchangeably or are thought to be the same product. Spermaceti is a clear liquid contained within the Sperm whale's head case. This liquid, possibly used for echolocation or buoyancy control, forms a solid white wax when cool. This is the substance that drove the great Sperm whaling industry throughout the eighteenth and nineteenth centuries.⁷⁸ Ambergris, or ambra, is a byproduct of digestion and is a darkish mass of oils, fats and undigested matter.⁷⁹ When excreted or vomited by the whale, ambergris floats in the ocean until it lands on the coast or is collected at sea (Fig. 8). While the value of waxy spermaceti is immediately evident, the value of ambergris, the unpleasant byproduct of Sperm whale indigestion, is less obvious. According to Dannenfeldt, the Sperm whale's favorite food, cuttlefish, are difficult to digest and thus a mass of indigestible material, a mixture of cuttlefish beaks, "amberin (a cholesterol), fatty oil, and benzoic acid," is produced in the stomach of the Sperm whale.⁸⁰

⁷⁵ N. Annandale, "The Survival of Primitive Implements, Materials and Methods in the Faroes and South Iceland," *Journal of the Anthropological Institute of Great Britain and Ireland* 33 (Jul-Dec. 1903): 246-258.

⁷⁶ Olaus Magnus, XXI, xx.

⁷⁷ Olaus Magnus, XXI, xxiv.

⁷⁸ L. Watson, *Sea Guide to Whales of the World* (New York: E. P. Dutton, 1981), 171; M. Carwadine, *Whales, Dolphins and Porpoises* (New York: DK Publishing, Inc., 1995), 80; Tinker, 215-219.

⁷⁹ A recent BBC News article reported that a "14.75 kg lump of ambergris" salvaged in Australia was worth approximately US \$295,000. "Whale 'vomit' sparks cash bonanza," *BBC News online* <http://news.bbc.co.uk/2/hi/asia-pacific/4642722.stm> (accessed 24 January 2006).

⁸⁰ K. Dannenfeldt, "Ambergris: The Search for its Origins," *Isis* 73, no. 3 (Sept. 1982): 382.

This unpleasant material had a host of medieval uses as medicine and, amazingly, even some culinary value.⁸¹

In his travels through the Arabian Sea and the southern oceans in the thirteenth century, Marco Polo frequently encountered whales and he is the only medieval author who accurately locates the physical origin of ambergris.⁸² Polo reported that the whales of the Arabian Sea produced a great deal of ambergris and that the local islanders caught whales and extracted the ambergris from the whales' stomachs during butchering.⁸³ Polo does not mention the use of oil, meat or bone, perhaps because these resources are more mundane, but he makes it clear that ambergris is the vital whale product in the Arabian Sea. In contrast, Albert the Great attributed *ambra* to excess sperm produced by copulating whales. This same association of excess sperm and ambergris was repeated by Olaus Magnus in the sixteenth century. Albert declared that ambergris was used in the treatment of paralysis, while Olaus Magnus stated that "They employ it... as a special, very expensive ointment to counteract gout and palsy.... It has restorative properties and is valuable for the treatment of fainting and epilepsy."⁸⁴ The *Kīng's Mirror* readily declares the utility, but not the origin, of ambergris: "...if one can get some of the sperm of this whale and be perfectly sure that it came from this sort and no other, it will be found to be a most effective remedy for eye troubles, leprosy, ague, headache, and for every other ill that afflicts mankind."⁸⁵ According to al-'Udhri and al-Idrīsi, ambergris was gathered on the beaches of Spain and Portugal for export to Cordova, Egypt and other foreign markets.⁸⁶ None of the authors relates ambergris specifically to the Sperm whale.

⁸¹ Dannenfeldt, 382. Ambergris was not the only whale product valued for medicinal purpose. Pliny the Elder reports that even whale flesh has medical application. In a long discussion of remedies for toothache and dental maladies, focusing largely on the consumption or application of various forms of boiled frog, whale flesh toothpaste serves as a cure of last resort. "If the teeth are decayed and foul, they recommend whale's flesh to be dried for a night in a furnace, and then the same amount of salt to be added and the whole to be used as a dentifrice" (Pliny *Natural History*, trans. W. H. S. Jones (Cambridge, MA: Harvard University Press, 1963), XXXII, xxvi).

⁸² Polo appears to be the only medieval western author who does not attribute ambergris to excess whale sperm at reproduction.

⁸³ Marco Polo *The Travels of Marco Polo*, trans. and ed. M. Komroff (New York: W. W. Norton and Company, 1982), viii; pp. 269, 273, 276.

⁸⁴ Albert the Great, XXIV, xvi; Olaus Magnus, XXI, xviii.

⁸⁵ *Kīng's Mirror*, XII, 124.

⁸⁶ D. M. Dunlop, "The British Isles According to Medieval Arabic Authors," *Islamic Quarterly* 4 (1957): 11.

Instead they attribute it to the generic whale category or, in the case of the *Kǫng's Mirror*, to the rorqual.⁸⁷

Spermaceti, the fine clear oil cradled in the crania of Sperm whales, receives only one mention in the texts surveyed here, when Olaus Magnus actually means to refer to ambergris.⁸⁸ The only author who makes specific mention of spermaceti, although not by that name, is Albert the Great in his description of the butchery of a Sperm whale in Frisia: "I saw one [whale] whose head was pierced through the eye with a lance, releasing a flow of oily fat that filled eleven large flagons, each of which was so heavy it could scarcely be lifted by one man. I examined the fat in these flagons and found that, after rendering, it yielded an oil of remarkable transparency and purity."⁸⁹ While the source of ambergris was not as evident as that of the fine spermaceti oil, there was no doubt as to the value of either in medieval society.

The variety of whales available to North Atlantic hunters was great, as was the variety of ways in which those whales could be used. But the spermaceti, ambergris, blubber, bone, innards and flesh were only valuable if whales could be acquired, which was no simple matter. Traditional North Atlantic strategies for whaling ranged from passive scavenging to driving to spearing. The variables discussed in this chapter, namely the waters, the whales and their great utility, led medieval Norse hunters to develop many different whaling strategies, adapting them to the new lands they encountered across the North Atlantic.

⁸⁷ *Kǫng's Mirror*, XII, 124.

⁸⁸ Olaus Magnus, XXI, xiii.

⁸⁹ Albert the Great, XXIV, xvii.

CHAPTER FOUR



WHALERS AND NORTH ATLANTIC ETHNOGRAPHY

Historical consensus dictates that premodern whaling amounted to little more than scavenging for coastal detritus, but ethnography of modern North Atlantic whalers provides unique insights into how their ancestors may have hunted. Whaling should be understood in a number of ways, from the active hunting of whales at sea to the strategic hunt of beaches and known stranding locales for stranded whales. Whaling could be passive scavenging or more active pursuit, entrapment, driving or wounding of whales. Nonetheless, ‘whaling’ still summons images of the classic harpoon whalers described by Melville or industrialized whalers of this century, even though the act and art of whaling incorporates many varied techniques. Many forms of pre-industrial whaling involve communal efforts and investments, but oftentimes one individual may be recognized as striking the killing blow. Whaling, more an activity like hunting than fishing, is necessarily both communal and individual. “[Whaling] is ethnographically associated with an investment of community time and labor, special knowledge, individual training and leadership, high risk and prestige...”¹ This generalization of the social and technological prerequisites for whaling communities applies to the

¹ L. F. Yarrow, “Prehistoric Uses of Cetacean Species in the Northern Gulf of Alaska,” in *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, ed. A. P. McCartney, 64 (Calgary: University of Alberta, the Canadian Circumpolar Institute, 1995).

wide variety of whaling peoples and methods to be presented in this chapter, and perhaps to the whalers of the medieval North Atlantic.

While some whaling methods are more spectacular than others, every strategy employed in acquiring whales is founded on decades if not centuries of knowledge of whale behavior and seafaring skills. The weapons and technologies employed in subsistence whaling differ little from those used in fishing or other resource acquisitions, as seen in chapter two and the fisherman of *Ælfric's Colloquy*. The Faroese *grindadráp* or whale drive provides insight into the whaling methods of Norse descendants, while comparative studies from other northern cultures reveal the inherent technological simplicity of a variety of whaling strategies. This chapter considers the rudiments of whaling, but more importantly, it negates one common objection to the notion of medieval whaling, that it was beyond the capability of medieval technologies to pursue whales at sea.

It must be admitted that scavenging was probably the most significant means of acquiring cetaceans. Scavenging of injured or killed whales lost by medieval Icelandic hunters will be discussed in chapter eight, but it is likely that scavengers more frequently took advantage of naturally stranded cetaceans. Why whales strand is a complicated issue and all strandings cannot be explained by any one cause.² Whales may strand when they are ill or wounded, when their age does not allow them to keep up with the pod, or because of malfunctions in sonar due to illness or human interference, such as clutter-noise of shipping or military sonar. Submarine topography seems to be an important factor behind strandings, and specific bays or beaches can be common locations for repeated stranding events. The topography of the ocean floor and the grade at which the floor rises to the beach may provide erroneous readings in cetacean sonar or echolocation. By sending out high frequency click sequences, or click-trains, whales and dolphins can determine by the returning bounce of the click-trains the terrain ahead and any impediments that they may face. If cetacean sonar malfunctions, misguided whales may venture into a shallow area believing it to be safe water. When the sea floor gradually inclines into shallow waters, the click-trains can skim above the surface of the ocean

² M. C. Sheldrick, "Stranded Whale Records for the Entire British Coastline, 1964–1986," *Investigations on Cetacea*, 22 (1989): 289–329. The reader will recall the interesting explanation given in the *Gesta Romanorum* in chapter two, that whales, when ill or injured, make for the shore "as is their nature."

floor rather than bouncing back. With no returning echo, the cetaceans expect deep water when a deadly stranding beach awaits them.

While the medieval Norse would not have known about echolocation, they would have recognized that stranded whales predictably could be found in particular locations, even if the stranding events themselves were unpredictable. Sagas record notable locales for stranded whales, as seen in *Egils saga Skalla-Grímssonar*, written in thirteenth century Iceland:

Skallagrim...had a farmstead built on Alftanes and ran another farm there, and rowed out from it to catch fish and cull seals and gather eggs, all of which were there in great abundance. There was plenty of driftwood to take back to his farm. Whales beached there, too, in great numbers, and there was wildlife there for the taking at this hunting post...There were islands offshore called Hvalseyjar (Whale Islands), because whales congregated there....³

The Norse certainly took note of common stranding sites when establishing settlements and colonies. Some Norse archaeological sites, such as Pool on Sanday, Orkney, can be found close to historic stranding beaches.

Knowledge of the places where whales ‘congregate,’ as described in *Egils saga*, was useful beyond the scavenging of stranded whales. Rudimentary whale hunting methods such as coastal net and harpoon hunting and the rounding up of small cetaceans in fjords or inlets are conjectured to have been potential whale hunting strategies in prehistoric and early historic Britain and Scandinavia.⁴ The rounding up and driving of whales into restricted harbors or bays has been practiced for centuries around the world by traditional whalers, yet this unspectacular driving method is rarely discussed in historical or literary sources.⁵ *Egils saga* again offers an exception: “whales came then in great numbers, and everybody was allowed to shoot as he pleased.”⁶ Without

³ “Egil’s Saga,” in *The Complete Sagas of Icelanders*, Vol. I, ed. V. Hreinsson, trans. B. Scudder, 67 (Reykjavík: Leifur Eiríksson Publishing, 1997).

⁴ R. F. Heizer, “Aboriginal Whaling in the Old and New Worlds” (PhD diss., University of California, Berkeley, 1941).

⁵ T. Akimichi et al., *Small-Type Coastal Whaling in Japan* (Edmonton: Boreal Institute for Northern Studies, 1988).

⁶ “*hvalkvádmur vǫru flá ok miklar, ok skjóta mátti sem vildi...*” Excerpt translated by Kristjánsson, in O. Lindquist, *Peasant Fisherman Whaling in the Northeast Atlantic Area, CA 900–1900 AD* (Akureyri: Háskólinn á Akureyri, 1997), 27. This same excerpt is translated by Fell in *Egils saga*, ch. 29: “There were frequent stranded whales, and anyone could shoot who wanted.” Kristjánsson’s translation is the preferred one, as “kvádmur” should not necessarily be equated with stranding.

ethnographic analogies from similarly developed cultures, including northern island communities of the North Atlantic, we would know much less of typical whale acquisition and butchering methods which may have originated in prehistory and the Middle Ages. The modern Faroese *grindadráp*, or the drive-hunting of Pilot whales, is essentially such a fundamental whale hunting strategy.⁷

The Faroe Islands are a North Atlantic archipelago of eighteen islands situated at 62°N, nearly equidistant from Shetland and Iceland. While the rough and mountainous land is suitable for grazing, the soil and the climate only allow limited agriculture.⁸ After sheep, cows and fish, whales constitute the majority of the Faroes' animal resources. The Faroese throughout their history have esteemed Pilot whale as a favorite food, whether fresh, smoked, salted or dried.⁹ Like Shetland and Orkney, the Faroes were an early Norse colony, although the islands were reputedly discovered and occupied by Irish monks well before they were settled by the Norse in the mid-ninth century.¹⁰ Dicuil described, among other northern isles, a remote group which may be the Faroes:

There are many other islands in the ocean to the north of Britain which can be reached from the northern islands of Britain in a direct voyage of two days and nights with sails filled with a continuously favourable wind. A devout priest told me that in two summer days and the intervening night he sailed in a two-benched boat and entered one of them. There is another set of small islands, nearly all separated by narrow stretches of water; in these for nearly a hundred years hermits sailing from our own

⁷ G. Clark, "Whales as an Economic Factor in Prehistoric Europe," *Antiquity* 21, no. 81 (March 1947): 87–88; B. Amos, "Blood Relations," *Natural History* 104.11 (Nov. 1995), 26–33; J. P. Joensen, "Faroese Pilot Whaling in the Light of Social and Cultural History," *North Atlantic Studies: Whaling Communities* 2 (1990): 179–184; K. Williamson, *The Atlantic Islands: A Study of the Faroe Life and Scene* (London: Collins, 1948), 95–119; J. Wylie and D. Margolin, *The Ring of Dancers: Images of Faroese Culture* (Philadelphia: University of Pennsylvania Press, 1981).

⁸ S. Arge et al., "Viking and medieval settlement in the Faroes: people, place and environment," *Human Ecology* 33, no. 5 (Oct. 2005): 599. See also Wylie and Margolin, 7. The reliance upon sheep must be of considerable antiquity, as the name "Faroes" means "sheep islands;" Wylie, 206, n. 1. Today an estimated 5% of the land is cultivated.

⁹ N. Shoemaker, "What Meat in American History," *Historical Ecology* 10, no. 2 (April 2005): 269–294. Shoemaker's article provides a fascinating cross-cultural comparison of the taste for whale meat among various modern and premodern cultures.

¹⁰ J. Wylie, *The Faroe Islands: Interpretations of History* (Lexington: University of Kentucky Press, 1987), 7; S. Dahl, "The Norse Settlement of the Faroe Islands," *Medieval Archaeology* 14 (1970): 60–73; K. Edwards, "'On the windy edge of nothing': a historical human ecology of the Faroe Islands," *Human Ecology* 33, no. 5 (Oct. 2005): 586.

country, Ireland, have lived. But just as they were always deserted from the beginning of the world, so now because of the Northman pirates they are emptied of anchorites, and filled with countless sheep and very many diverse kinds of sea-birds. I have never found these islands mentioned in the authorities.¹¹

Palaeobotanical analysis indicates some environmental change resultant from human settlement occurred in the Faroes as early as the seventh century, but it is unclear whether this impact was due to resident hermit populations, as Dicuil notes, or an early Norse settlement.¹² Some modification of the natural landscape seemingly would be essential to survival in the Faroes, although palaeoecological analyses of soils and pollens reveal no large scale modifications of the land as apparent in Iceland and elsewhere. This may indicate that Norse colonists adapted their own subsistence practices to the island rather than adapting the landscape to traditional ecological strategies.¹³

The Faroes, like Iceland, would have offered few native land mammals of any utility to the settlers, so the majority of animal resources, outside of imported domesticates, would have come from birds, fish and marine mammals.¹⁴ The Norse settlers in the Faroes may have developed techniques of whale acquisition suited to the islands' long beaches and shallow coasts, strategies less well-suited to the fjords of western Norway. The Viking age homestead at Kvívík, built shortly after the arrival of the Norsemen, produced Pilot whale bones alongside remains of domestic mammals, sea birds and fish.¹⁵ All evidence, written and material, indicates an early and consistent reliance upon whales by the Faroese, first noted historically in the *Seyðabrévið*, or the Sheep Letter, a 1298 special enactment in the Norwegian Gulathing lawcode. The Sheep Letter, largely agricultural laws, also established special rules

¹¹ Dicuil *Liber de Mensura Orbis Terrae*, ed. J. J. Tierney (Dublin: Dublin Institute for Advanced Studies, 1967), vii.14–15; 75–77. Tierney, ch. VII, n. 6–15 describes this section of Dicuil's work as 'the most original;' n. 14–15 discusses the academic debate surrounding the identification of these islands as the Faroes.

¹² Edwards, 589. While the Norse arrival is cited around the early 800s, Edwards notes that palynology indicates some evidence of cultivation by the late seventh century.

¹³ Ecological evidence to support this argument is provided in I. Lawson et al., "Historical ecology on Sandoy, Faroe Islands: palaeoenvironmental and archaeological perspectives," *Human Ecology* 33, no. 5 (Oct. 2005): 651–684.

¹⁴ K. Smith, "Landnám: the settlement of Iceland in archaeological and historical perspective," *World Archaeology* 26, no. 3 (1995): 323–324.

¹⁵ Wylie, 1987, 9.

for the ownership of stranded whales or whales found close to the land.¹⁶ It does not, however, devote great attention to whale drives, which would become essential to the Faroese economy. The official historical record of Faroese Pilot whaling begins in 1584: "These records are unique in that they provide the longest and most complete statistics available for the catch of any wild animal."¹⁷ The Faroese whaling tradition represents at least eight centuries of Pilot whale exploitation and even with the addition of new technologies, whaling has remained as culturally, socially and economically crucial to the Faroes and its people as when the Norse arrived centuries ago.

The Faroese whale drive is a community-based non-commercial enterprise, in which free whale meat and blubber are shared throughout the village where whales are landed.¹⁸ The whale that is most commonly hunted is the Long-finned Pilot whale, *Globicephala melas*, called the *grind* in Faroese. The term *grind*, referring both to the whales and their meat and blubber, derives from the Old Norse for gate or fence, although the precise relation of this term to whales is a subject of debate.¹⁹ "Most scholars believe that the modern usage is derived from the verb *grinda*, because when whales *grinda* or *grindast*, pausing in a dense school, they resemble a barred gate."²⁰ Alternatively, *grind* could derive from "... the old Scandinavians [who] were in the habit of chasing [the Pilot whale] into a kind of trap, which was provided with gates that could be shut behind the school, thus preventing their escape."²¹ Regardless of the derivation of the term, the hunt itself is seen as the heritage of the Faroes from their Norse ancestors: "its development in historical times as a local elaboration of Viking Age culture is fairly clear."²² The *grindadráp* reveals the technological simplicity by which such a major resource could be acquired. Its simplicity, though, is deceptive. Faroese

¹⁶ D. Bloch and M. Zachariassen, "The 'Skinn' Values of Pilot Whales in the Faroe Islands," *North Atlantic Studies: The Faroe Islands* 1, no. 1 (Århus, 1989) 39; Wylie, 13.

¹⁷ "Pilot Whaling in the Faroe Islands," *High North Alliance* <http://www.highnorth.no/pi-wh-in.htm> (accessed October 1998).

¹⁸ Amos, 30: "most [whale meat] is eaten within a few miles of where it was landed."

¹⁹ Joensen, 1976, 5.

²⁰ Wylie and Margolin, 103.

²¹ N. Annandale, *The Faroes and Iceland: Studies in Island Life* (Oxford: Clarendon Press, 1905), 43–44. The *grindaraktur* is most often compared to the driving of sheep into a fold, and the term *rakstrarmenn* "can mean either sheep herders or *grind* hunters." Joensen, 1976, 13.

²² Wylie and Margolin, 103.

drive-whaling requires skill, practice and strategy, and the difficulty of whaling is ameliorated by experience and knowledge of the sea and animal behavior.

Although it is unclear when the *grindadráp* was first practiced, it seemingly grew out of necessity and economic pressure after the Faroes were incorporated into the Norwegian kingdom in the thirteenth century, alongside Iceland, Orkney and Shetland.²³ Like these other territories, the Faroes lost free trading rights and faced economic pressures for tribute and tax from the Norwegian crown. Furthermore, after AD 1300, the climate became colder with the onset of the Little Ice Age, so what little agriculture there had been was placed under even more extreme pressure. Thus, “the Pilot whale could have assumed great importance in these times of crisis.”²⁴ The exploitation of Pilot whales was a natural response to such economic and ecological pressures.

Pilot whales provide the Faroese with crucial meat and protein resources today, as well as other raw materials, including skin, oil, bone, baleen, ivory, wastes and innards. While meat and blubber are the most important products of the whale-drives, these other raw materials were highly valued in traditional Faroese society:

The stomach-skins are tanned and inflated for use as buoys with the long-lines, and in former days thongs of the dried skin were used in the boats to tie the oars to the wooden *tollar* which take the places of rowlocks. Several people are expert at working the whalebone into brooches, paperknives, penholders and other small ornaments... In two places among the islands I have seen garden walls built entirely of the skulls of caaing-whales.²⁵

Nelson Annandale’s 1903 article on the ‘primitive implements’ of the Faroes and Iceland is a treasure-trove of ethnographic detail, invaluable for archaeologists, on the uses of Pilot whale bone. Fresh bones were useful as a fuel, but dried bones were put to innumerable uses. Annandale reports that ribs were used as boat-rollers, skulls were used to support boats under construction and vertebrae, as stools, to support the boat-builders. Pilot whale jaws, when disarticulated, became peat shovels. Children made use of vertebrae and vertebral epiphyses as toys and flattened cut ribs as skates. Ribs were also used to produce needles

²³ Joensen, 1976, 6.

²⁴ Joensen, 1976, 6.

²⁵ Williamson, 1948, 114.

and weaving swords.²⁶ While the bones were invaluable for everyday domestic tools, the real value of the whales was the immense supply of meat that could be salted, frozen or dried for use throughout the year. “In modern Faroese society an annual catch of c. 2,500 whales still represents half of Faroese meat production (equal to sheep and cow production) and a quarter of Faroese meat consumption...”²⁷ It is likely that the reliance of the medieval Faroese on whale meat must have approximated or surpassed that of the modern Faroes. As will be seen in the analysis of the Icelandic sagas in chapter seven, competition was frequent and fierce when such valuable resources were at stake. Communications could be curtailed between farms or, in the Faroes, villages in order to keep rival claims at a minimum. In the modern drive, a local government official or sheriff, called the *sylsumaður*, supervised and divided the catch once the whales landed at one of the approved landing sites. Legality and order are of primary concern in the whale drive, so that the whole community benefits from the whales and does not suffer from arguments over fair division.

The Faroese whale drama begins with the initial sighting of the whales. The cry ‘*grindaboð*’ literally meaning ‘*grind* announcement,’ is called upon the first sighting of whales. The means of announcing a drive varied, but in ancient Scandinavia, notification was given by the carrying of a wooden cross around to all villages and farmsteads.²⁸ Variations of the wooden cross existed across Scotland in regions where the Norse historically exerted cultural influence:

...[the] “Fiery Cross,” [was] a well-known symbol in former times in Shetland, Orkney, the Hebrides, parts of Scotland and the Isle of Man... So powerful a symbol was the “Fiery Cross” that in the British Isles it outlived the period of Norse supremacy by hundreds of years [and]... it was carried in the middle of the last century in Shetland to give warning of the presence of caaing-whales in the firths.²⁹

The finder, or the first person to spy the whales, either offshore or on land, raised the cry and signaled others to attend to the boats and

²⁶ N. Annandale, “The Survival of Primitive Implements, Materials and Methods in the Faroes and South Iceland,” *Journal of the Anthropological Institute of Great Britain and Ireland* 33 (Jul.–Dec. 1903): 246–258.

²⁷ D. Bloch, et al., “Pilot Whaling in the Faroe Islands, July 1986–July 1988,” *North Atlantic Studies: Whaling Communities* 2 (1991): 43.

²⁸ Wylie and Margolin, 104.

²⁹ Williamson, 1948, 102–103.

prepare for the drive. While there was much responsibility laid upon the quick action of the finder, this person was amply rewarded by receiving the largest whale of the kill.³⁰ Old Norse law similarly was generous to the finders of stranded whales, who received ample shares of blubber and meat.

Those on land who sighted whales had many options in transmitting the *grind* announcement. Bonfires were lit at designated locations or sheets were spread out across fields in particular patterns to reveal the location of the *grind*.³¹ Another method of notification was the upturning of freshly dug sod at a specified location called a *roykstaðir* or 'smoke site'.³² Communication of the presence of whales did not carry on indefinitely throughout the Faroes, but only within a designated district. There are nine whaling districts and twenty-two approved whaling bays, *hvalvágir*, throughout the Faroes, the best of which are characterized by long sandy shorelines with a gradually inclining slope from the sea onto the beach.³³ Depending upon the size of the *grind* pod, the call could be delivered within a single district or further afield.

The pursuit of whales, *grindarakstur*, can be the most difficult and time-consuming stage of the *grindadráp*, taking place over several consecutive days and nights or concluding almost instantly. But the whales are not simply driven ashore hastily, for they could sound and escape at any time. The course of the drive is made more difficult by the fact that the size of the pod is really only an estimate, since "...only 10% of the school can be seen at a time."³⁴ The drive, with so many complicating factors, is skillfully controlled by the hunters and the *grindaformann*, the whale drive foreman, who interprets the interplay of wind, water, men and whales. The *grindaformann* oversees the *grindadráp* by leading the hunt and spearing the first whale, thus initiating the drive. The *grindadráp* is a marathon, not a brutish footrace. The foreman decides upon the landing bay and the pace of the drive and his orders are passed through the

³⁰ Joensen, 1976, 22; Wylie and Margolin, 96.

³¹ Joensen, 1976, 8.

³² R. Joensen in Joensen, 1976, 8.

³³ "Pilot Whaling in the Faroe Islands," *High North Alliance* <http://www.highnorth.no/pi-wh-in.htm> (accessed October 1998). Reconstruction of whaling bays from antiquity is made difficult by coastal uplift and eustatic change, change exacerbated by climatic unrest of the late Medieval Warm Period and Little Ice Age. Sloping beaches or bays, as discussed in chapter three, caused an artificial stranding and were the most efficient means of concluding a drive.

³⁴ Joensen, 1976, 13.

fleet. During the drive, the boats maintain a crescent formation behind the whales, staying a suitable distance away so as not to frighten them. Anywhere from four to a dozen or more small skiffs or fishing boats take part in the drive. We are tempted to recall in this whaling strategy the fisherman of *Ælfric's Colloquy*, who refused to hunt for whales using many boats. The drive, for the unstudied and uninitiated, must have seemed dauntingly complex.

The hunters move the whales into position using a number of tactics, many of which have ancient antecedents including clapping, noisemaking upon the water, singing and shouting. These techniques are not only used by Faroese whalers, but were also described by ancient and medieval authors. The ninth-century Norse whalers of Ireland described by al-Udhri clapped and shouted to attract young whales.³⁵ Albertus Magnus also recorded the use of singing and noisemaking in thirteenth-century whaling efforts: "The fishermen, noting the place where the whale is found, gather there with many boats, and they make a concert of pipes and flutes around it, to attract it to follow (for it delights in this sound)."³⁶ Sound or noisemaking seems to be a component in most whale hunting strategies, used either to attract or to repel whales. Oars and hands can be slapped against the water to drive the whales, and objects are tossed into the water, both to create noise and disturbance. Another tactic with ancient origins used to drive whales forward is the casting of tethered or untethered stones into the water. These stones, called *kast* in Faroese, are thrown into the water behind the whales. There are two types of stones that are used, the *leysakast* and *fastakast*. *Leysakast* are plain stones thrown into the water, but *fastakast* are perforated and tied to a rope, so that they may be plunged into the water and retrieved for continuous use.³⁷ Historical accounts from the early and later Middle Ages record the use of both stones and noise-making in whale hunting, but also report men pouring blood into the water, stating that the whales will not swim through such pollutants. Traditional whalers believe that whales will not swim through substances such as blood or even garlic. Al-Udhri's account of Hiberno-Norse

³⁵ J. Fairley, *Irish Whales and Whaling* (Belfast: Blackstaff Press Limited, 1981), 117. al-Udhri's account will be discussed at greater length in chapter six.

³⁶ Albertus Magnus quoted in J. B. Friedman, "Albert the Great's Topoi of Direct Observation and his Debt to Thomas of Cantimpré," in *Premodern Encyclopaedic Texts*, ed. P. Brinkley, 390 (New York: Brill, 1997).

³⁷ Joensen, 1976, 13.

whalers noted such uses of potions: “Sometimes the mother of the whale-calf sees the struggle and follows [the whalers]. They prepare much powdered garlic, which they scatter on the water. When the whale smells the garlic, she lets [the calf] go, and turns backwards in her tracks.”³⁸ If introduced in substantial quantities, these polluting substances could burn the whale’s eyes, if inhaled could inflame the lungs, or could even intoxicate the poor creature.³⁹

Through these drive tactics, the *grindadráp* reaches the point where the whales are positioned before the intended landing point. The goal of the drive is to force the whales into fast flight so that they beach themselves high up on the shore. While designated bays serve as landing points today, the medieval Faroese by law and necessity made use of any suitable coastline, even private property. If undesignated bays or beaches were used, the catch had to be divided further. According to Seyðabrævið, “the hunters’ share was one quarter of the catch, while the landowner’s share was three quarters....”⁴⁰

Returning to the modern drive, once the first whale has been struck, the foreman gives the signal to begin spearing the other whales, although this is usually done only once the whales have gone as far ashore as possible. Whales, in a panic, may drive themselves further ashore, while those who escape the spearing often remain with the wounded members of the pod. Svabo, who reported on the *grindadráp* in the eighteenth century, wrote that: “if some fish [i.e. whales] strike out to

³⁸ Fairley, 117. The Chugach of the Gulf of Alaska dispersed a poison made of human fat into the water, blocking the whale’s path to the open sea. The whale would not swim through the fat.

³⁹ Pliny the Elder recounts one sad tale of a dolphin at Hippo Diarrhytus in Africa that was uncommonly friendly and attentive to humans, who swam with it and fed it by hand. Flavianus, governor of Africa, decided to anoint this friendly creature with perfume, a gesture surely meant to honor the exceptional creature. The effect, though, was rather the opposite of Flavianus’ intention: “...because it was not used to the smell, the dolphin drifted in a stupor, and avoided men for some months as if it had been driven away by this insult” (Pliny, IX, xxvi). While the noxious odor supposedly affected the dolphin adversely, the now-Romanized dolphin developed a taste for Roman *luxuria*, later returning to Hippo Diarrhytus and resuming its friendly relations. See T. F. Higham, “Nature Note: Dolphin-Riders. Ancient Stories Vindicated,” *Greece and Rome* 7, no. 1 (Mar. 1960): 82–86. Higham discusses the famous case of Opo, ‘the dolphin of Opononi,’ who, in the 1950s, frequented the beach at Opononi, New Zealand. Numerous folk songs, of incredibly dubious quality, celebrated the life and lamented the death of this gregarious dolphin, who offered confirmation of the stories told by Pliny and other classical authors of friendly dolphins who befriended humans and aided sailors in need.

⁴⁰ Wylie and Margolin, 120.

sea again, . . . it is generally known that they will return to the place of the kill and, as one says, 'run back to the blood.'"⁴¹

Each whaling boat of the *grindadráp* is equipped with the range of tools used in the drive that come into play once the whales have been driven into the bay. Each boat is fitted with several stabbing lances, called the *hvalvákn*, a steel blade approximately forty centimeters long, attached to a two-meter long wooden shaft and a line. If the whales do not ground themselves the killing time is lengthened, for each whale must be stabbed to urge it to shore and then either dragged ashore or alongside a boat with the *sóknarongul*, a hooked iron gaff inserted into the whale's blow-hole.⁴² While the lance is used as a wounding and driving weapon, the iron hook is only used to draw the whale closer to the hunter or a boat.⁴³ Occasionally, a harpoon, *skutil*, is used as well, but traditionally it was only used when the drive was abandoned due to difficulties in timing, weather, or the behavior of the school. Once a drive is abandoned, the foreman allows harpoons to be used on the whales so that at least a few whales may be taken and the entire hunt not be lost. With the harpoon, a weapon of last resort, the whale then must be towed alongside or dragged into the boat. When harpoons are used, the *grindadráp* ceases to be a communal effort and the hunter then must pay a small tax for each whale caught.⁴⁴ Once ashore, by whatever means, the whales finally are dispatched with a single swift slice through the spinal cord with the long knife, the *grindaknívur*. The kill can take anywhere from minutes to hours depending upon the size of the pod, the length of the drive and the conditions of the sea and the whalers.⁴⁵

Following the kill, the beach is lined with the carcasses of whales which are immediately bled and gutted in order to prevent spoilage of the meat.⁴⁶ The lawmen take control and the *grindbyti* begins, the process of measuring, counting and dividing the *grind*. The medieval laws of

⁴¹ Svabo in Joensen, 1976, 17.

⁴² The hooked iron *sóknarongul* is roughly the same length as the lance blade, and it is attached to a long line, up to twenty-meters in length, which is used to tow a whale alongside a boat. While the lance is used as a wounding and driving weapon, the iron hook is only used to draw the whale closer to the hunter or a boat. Joensen, 1976, 14–15.

⁴³ Joensen, 1976, 14–15.

⁴⁴ Williamson, 1948, 104.

⁴⁵ Williamson, 1948, 104.

⁴⁶ Joensen, 1976, 20. In previous decades, the kidneys and liver were eaten at once for they would spoil if they were left until the following day.

Norway and Iceland typically do not legislate whale drives, as do the Faroese laws. Rather, most medieval laws deal with the contentious division of a single whale rather than a pod. Just as the *grindadráp* provides insight into possible strategies of medieval whale acquisition, the process of whale division may reveal insights into traditions now lost to the historical record.

After the hunt, the community feasts and celebrates the *grindadansur*, a ritual of song and dance in which the whaling crews, so effective as a team at sea, now cooperate in a communal celebration.⁴⁷ As the hunters engage in these leisurely yet essential activities, lawmen decide the whales and determine their value. Once the whales are lined up beyond the reach of the tide, at least two appointed men begin the assessment of each whale's value in *skins*, "the ancient Norse measurement of land and produce."⁴⁸ The assessor assigns a *skinn* value to each whale based on its length, measured from the eye to the anus. "[The] weight of '1 *skinn*' is commonly reckoned to be 50 kg of meat and 25 kg of

⁴⁷ While one might not consider a dance to be significant compared to a whale hunt, the *grindadansur* cements the exceptional circumstances of the day of whaling within Faroese culture. According to Wylie, it also helps to prevent a crisis: "There is an immediate emotional and practical problem; while the whales are being valued, what are we going to do all night with the cold, wet, armed, bloody, worked-up, and perhaps drunken men who have appeared in town?" (Wylie and Margolin, 113). The condition of the men after the hunt is often called the "pilot whale psychosis," referring to the hunting mentality which allows the normally mild-mannered Faroese to kill dozens of animals in blood-drenched conditions. The dance is the traditional answer to this crisis. It allows the tired hunters mental respite and some physical relaxation prior to the claiming and butchering of the whales on the following morning. While the whale hunt represents the economic survival of the Faroese, the dance and its components represent the Faroes' social survival. The *grindadansur* is an all-night affair, stretching from the kill of the whales to the crack of dawn when the whales will be claimed by the hunters and the community. Through the required precision of song and dance, *grindadansur* prevents squabbles and concern over whale division, as appear so frequently in the medieval Icelandic sagas. Without this formalized dance, hunters might remain at the kill site to monitor the whales or to hassle the lawmen for their share. The *grindadansur* also ensures that the status of the hunters is equalized: "It mingles in a common activity all grades of hunters, while shifting the focus of attention from their differing specialties to those of the leaders of the ballad singing—and the leaders of the singing shift from one ballad to the next" (Wylie and Margolin, 117). As a result, no individual hunter maintains power over any other hunter. The complex songs and dances of the traditional *grindadansur* require the men to retain their focus, to shed the "pilot whale psychosis" of the hunt, and to re-enter the controlled atmosphere of Faroese society.

⁴⁸ Bloch et al., 41. The *skinn* is a derivation of the old Norse system of *ell* measurement, whereby an *ell* equals roughly eighteen inches.

blubber.”⁴⁹ Each whale typically renders 426 kg of meat and blubber, so when multiplied by the number of animals in the pod, the quantity of whale products gained from a single drive can be substantial.⁵⁰

The division is not merely a matter of calculating the number of whales, boats and the population of the district. Many individuals are given rights to specific whales or larger portions based on their exceptional duties during the drive. These favored portions were also granted under medieval law. The person who first sighted the whales, the ‘finder,’ is granted the *finningarfiskur*, the largest whale. Individuals with specialized duties in the *grindadráp*, including the foreman, assessors and the sheriff himself, also are given fixed shares for their additional labor. If boats and equipment have been damaged, compensation was provided by the sale of the *skaðahvalur*, the whale designated for sale to repay such damages.

This long description of the *grindadráp* offers insights into fundamental whaling strategies which may have been used by early North Atlantic communities. The hunt as practiced in the Faroes requires delicate strategy and great knowledge, but it is rudimentary in technique and equipment. Nearly all implements used are common tools for hunting or fishing. The single exception is the *grindaknívur*, the long slender-bladed knife used to cut the whale’s spinal cord. More than a simple knife, the *grindaknívur* is a cultural artifact unique to each hunter.

[It is] considered one of the foremost Faroese contributions to Nordic artistic craftsmanship. The Pilot whale knives, which are made by skillful smiths and creative craftsmen, are as a rule completely handmade. Each knife-smith has his own mark which he stamps into the blade. The worth of the knives often depends on who made them, and all consider it a great honour to own a knife made by a renowned knife-smith. The haft and sheath are usually made of high quality wood and have inlay of brass and silver. The motifs in the inlay are Pilot whales and whaling equipment. The knife is carried at the waist on a colorful woolen band woven of 12 threads...⁵¹

The fact that the killing blade is invested with so much care in its production and presentation is evidence of the cultural significance of the Pilot whale kill. No clear parallel weapon has been found in the medieval archaeological record. It is likely that these tools, if they

⁴⁹ Bloch and Zachariassen, 42.

⁵⁰ Bloch et al., 43.

⁵¹ Joensen, 1976, 15.

existed, would have evaded most archaeological deposits, apart from burials, and may have been passed down as family heirlooms.

Ole Lindquist has made extensive study of the terminology for North Atlantic whaling equipment from the tenth through the early twentieth centuries.⁵² The fact that no special whaling tackle is known from medieval assemblages does not necessarily indicate that whaling was not practiced. Lindquist's analysis of the complex legal evidence for pelagic and inshore whaling practices reveals that a range of basic, multi-purpose weapons, not unlike the weapons of the *grindadráp*, was used in the acquisition of cetaceans. He asserts that hand-harpoons were not used to hunt large cetaceans on the open seas until the seventeenth century and that spears and lances were the main killing tools in the Middle Ages, just as in the Faroese drives.⁵³ Medieval whaling was more likely inshore and bay whaling, allowing strategies that incorporated jabbing weapons rather than more complex harpoons with a shaft, head, and attached line. Both spears and harpoons could be barbed, so the essential distinction between these weapons was the line, which kept the whale in contact with the hunters, allowing the whale not only to be tracked but also towed.⁵⁴ Medieval whalers, without benefit of attached lines, had to be prepared to lose their quarry and recover it in more innovative ways.

The language of whaling in Old Norse-Icelandic laws included Old Norse *skutill* and Old Icelandic *skutull*, or 'shot.' A shot was all one

⁵² O. Lindquist, "Whaling by Peasant Fishermen in Norway, Orkney, Shetland, the Faeroe Islands, Iceland and Norse Greenland: Medieval and Early Modern Whaling Methods and Inshore Legal Régimes," in *Whaling and History Perspectives on the Evolution of the Industry*, eds. Bjørn L. Basberg, Jan Erik Ringstad, and Einar Wexelsen, 17–54 (Sandefjord: Kommandor Chr. Christensens, 1995).

⁵³ Lindquist, 1995, 18. "The spear is essentially a pointed shaft for darting; when more elaborate it consists of a head joined to a shaft. The point may be strongly fixed as to remain in position or it may be designed to detach and break off after piercing. The spear is basically a wounding instrument. . . . [The] killing instrument for [larger] animals is the lance which has a longer cutting edge and stronger shaft than the spear" (Lindquist, 1995, 18–19).

⁵⁴ Lindquist, 1995, 19. Lindquist notes that harpoon heads made of bone have been found in archaeological contexts in Norway through the fifth century AD, during the Scandinavian Iron Age, yet clearly a time when fisher-hunters still relied on traditional subsistence tools and prey. These bone weapons would have been suitable only for hunting seals and porpoises, and possibly the smallest cetaceans. None of these weapons, though, would be suitable for the taking of a large whale at sea and a thorough analysis of the terminology of whale and seal hunting in medieval laws of Norway and Iceland reveals a predominance of "piercing and shooting" weapons (Lindquist, 1995, 19–22).

needed to hunt in Norway's fjords, where a whale could be speared and hunters could wait for the quarry to drift ashore if the fjord were blocked. Fjord hunting, though, was not always adaptable to new ecosystems and geographies as the Norse traveled and settled the North Atlantic. By AD 650 to 950, iron spear points and arrow heads had become common grave goods in Norwegian weapon graves and by the thirteenth century the *hvaljarn*, or whale iron, is mentioned in both sagas and laws.⁵⁵ These new tools, coupled with innovations in boat building, may have revolutionized whaling, allowing the hunt for the larger species and hunting outside of the fjords. Lindquist, though, argues that no whaling harpoons are known archaeologically prior to the seventeenth century and that spear whaling was the primary means of hunting throughout the Middle Ages. A 'whaler's grave' from late eighth or ninth century Hundholmen, Tysfjord, Norway, includes alongside the hunter's body a spear head and the hyoid bone of a large cetacean. Lindquist and others read the whale bone as a whaler's trophy, and notably, a spear and not a harpoon is placed with the individual.⁵⁶

The gear of the modern Faroese whale drive is similar to the pre-modern equipment described by Lindquist, but one crucial piece of equipment which Lindquist does not describe is the whaling vessel. The boats used in the Faroese whale drive are traditional eight to ten-oared skiffs and fishing boats. "There has never been any special 'grind-boat' in the Faroes, and the traditional Faroese coastal fishing boats are used in the drives."⁵⁷ Such small vessels are preferable in the whale drive, for they are easier to manipulate and less cumbersome when many boats cluster together in the final kill.

The boats which could have functioned as drive vessels in the Viking and Norse periods are not those best known Viking Age ships, namely the large *karfar* as found in the Gokstad and Osberg ship burials. These large vessels would have served as transports for men, livestock, and goods. These ships average twenty-five meters in length and were powered either by sail or by oarsmen. Other large cargo vessels, such as the *knarr*, which were roughly fifteen meters long, would have been used in expeditions such as Ottar's. Neither of these vessel types would have been suitable for whale drives, but the smaller clinker-built craft,

⁵⁵ Lindquist, 1995, 19.

⁵⁶ Lindquist, 1995, 24.

⁵⁷ Bloch et al., 38.

up to twenty feet, which accompanied the Gokstad ship burial were small and maneuverable and suited to a drive.⁵⁸ According to one author, such boats were “[potentially] splendid craft for mackerel spinning, but not suitable for bringing a large and lively fish on a line in over the side.”⁵⁹ The Skuldelev 6 vessel at Roskilde harbor is a *ferja*, described as an appropriate vessel for whaling, sealing and fishing. At eleven meters, manned by twelve to fourteen men, this small fishing vessel was altered sometime after its construction, “by the addition of an extra plank, perhaps a ‘plank of avidity’ as is common on fishing boats when fish are plentiful.”⁶⁰ Since drive whaling does not involve catching, hauling or towing a whale, but rather driving it ashore, such small, light vessels, with or without modification, may have served perfectly for such a task.

Drive-whaling could have been a prominent form of cetacean hunting in the prehistoric and medieval northern world, as some sites from the Faroes and even England may indicate, but it is rarely mentioned in historical, legal, or literary works of the period.⁶¹ The fisherman in *Ælfric’s Colloquy* may refer to a sort of drive whaling, but more likely communal hunting, when he claims he does not wish to use multiple boats to hunt a whale that could kill him with a single blow. The *King’s Mirror* describes the driving of large groups of ‘blubber-cutters,’ probably Pilot whales or another species of dolphin: “they are constantly being caught and driven to land by the hundreds, and where many are caught, they provide much food for men.”⁶² The Annals of Ulster, for the year 828, records “A great slaughter of porpoises on the

⁵⁸ O. Crumlin-Pedersen, “Ships, Navigation and Routes,” in *Two Voyagers at the Court of King Alfred: The Ventures of Ohthere and Wulfstan together with the Description of Northern Europe from the Old English Orosius*, ed. N. Lund, trans. Christine Fell, 31 (York: William Sessions Limited, 1984). Clinker-built refers to the method of boat building which overlaps the long curved planks of the boat atop one another. These overlapping boards, held together with iron rivets, were sealed with sap, fur, or hair and other substances.

⁵⁹ J. Simpson, *The Viking World* (New York: St Martin’s Press, 1980), 74.

⁶⁰ T. Damgård-Sørensen and M. Brandt Djupdræt, *Viking Ship Museum in Roskilde* (Roskilde: Viking Ship Museum, 2003), 14.

⁶¹ Few archaeological sites have produced evidence remotely indicative of a whale drive, but the absence of physical evidence on site does not mean the drives did not occur. As has been established, whale butchery tends to occur on shore rather than on settlements, even for smaller whales like the Faroese *grind*.

⁶² *The King’s Mirror*, trans. L. M. Larson (New York: Twayne Publishers, Inc. and the American-Scandinavian Foundation, 1917), XII, 124.

coast of Ard Cianachta by the foreigners,” namely the Norse.⁶³ These references, though, are exceptional. When active whaling is alluded to or depicted in medieval Icelandic or Norse texts, the quarry seem to have been larger whales.



Faroese drive-whaling provides a direct cultural comparison for the possible hunting methods of medieval North Atlantic whalers but no clear North Atlantic ethnographic equivalent exists in the case of open-sea whaling. Other northern cultures of the Arctic Inuit and Pacific Northwest, though, offer examples of traditional pelagic whaling, yet these are cultures with extremely complex whale hunting rituals that integrate the whale within the culture's ideology. The Faroese rely on whales economically and whaling is a fundamental part of their identity, but whales are not an essential element in Faroese ideology or spirituality.⁶⁴ For many Native American and First Nation peoples, including the Makah, and various Inuit and Aleut peoples who today qualify under the International Whaling Commission's aboriginal subsistence regulation to a limited annual whale catch, whales are central to the physical and spiritual survival of their cultures.⁶⁵ Such cannot be said for the later Christian Norse North Atlantic, where whales were appreciated and culturally significant, but not revered.

The pursuit of large whales, such as Grey, Humpback, Sperm and Right whales, on the open sea or even within sight of land, may seem an impossible task for minimally armed small boats and hunters.

⁶³ *The Annals of Ulster (To AD 1131)*, ed. S. Mac Airt and G. Mc Niocaill (Dublin: Institute for Advanced Studies, 1983), 285.

⁶⁴ The governments of Norway and Iceland likewise contend that whaling is an important part of their cultural heritage. The difference, though, between Norway and Iceland and the Faroe Islands is one of quarry. The Faroese do not face routine challenges to their whaling program as do Norwegians because of the species they pursue and the size of the whales. Pilot whales are not subject to IWC regulation.

⁶⁵ The recent case of the Makah whalers of Washington state illustrates the survival of whaling traditions within a culture that has not been allowed to hunt whales for over fifty years. The Makah, who willingly halted their whaling efforts half a century ago to prevent the endangerment of California grey whales, in 1999 won the right to resume whaling. Marcy Parker, a Makah spokeswoman said: "The hunt is the missing link, the thing that brings us full circle to our traditions." Sam Howe Verhovek, "Protestors Shadow Tribe's Pursuit of Whales and its History," *New York Times* (2 October 1998): A12.

However, depending upon the species of cetaceans and the skill of the hunters, the killing and butchering of large whales on the open sea, like the drive for smaller species, need not be a technologically complex affair. For traditional whale hunters from the Americas to Asia, basic strategies of harpoon hunting for large whales are both inherently simple and undeniably dangerous, requiring a great deal of knowledge for a successful hunt. The hunters, in a single boat or a group of small boats, approach a surfaced whale. Without exploding harpoons or firearms, which are discouraged for a host of reasons, the hunters must be within close proximity to the whale in order to obtain sufficient force to embed a harpoon or spear.⁶⁶ Whales typically are harpooned in one of three optimal locations: below the flipper, the back fin, or the tail.⁶⁷ There is little chance of a hand-thrown harpoon penetrating the full thickness of blubber carried by most whales, so the hunters must choose areas which are particularly sensitive or where, if struck, the whale would have little chance of removing the harpoon before bleeding to death.

Once wounded, some whales react violently, others sound to the ocean floor where hunters believe they attempt to rid themselves of harpoons or lances. If the hunters are able, they will continue to strike at the whale as it remains on the surface. The harpoons and lances in the hunt for great whales can be attached to lines so that their detachable heads remain in the whale, for use in towing them to shore. Some whalers use floats and buoys made of seal or cetacean stomachs, which are attached to the harpoon lines or directly to a whale. These floats keep track of the whale's movements and they aid in the towing of the heavy line back to the boat. The floats also add resistance against the whale's efforts to swim away. Most importantly, they help keep a dead whale buoyant. Many species sink when dead, only rising when internal gasses have inflated the animals. The sixteenth-century Basque

⁶⁶ Firearms are seen as dangerous to the crew and the quarry—for the whalers don't want to ruin the meat which they hope to acquire. Firearms have been used experimentally in the Faroese hunt, in order to provide a quicker and more humane kill for the whales, but traditionalists contend that the whaling knives are just as efficient and just as humane as a gun. Lastly, for many subsistence hunters, tradition matters as much as the quarry and contend that firearms have no place in traditional whaling ritual or method. See also "To kill a whale: Interview with senior veterinarian, Jústines Olsen, on killing methods in the pilot whale hunt," *High North Alliance* http://www.highnorth.no/Library/Hunts/Faroe_Islands/to-ki-a.htm (accessed October 1998).

⁶⁷ Yarborough, 71.

whalers of Red Bay, Labrador were extremely successful hunters who made efficient use of such inflated drags. The Basques used teams of small boats manned by half a dozen men in their hunt for Right whales. “[A] whale was harpooned with a barbed iron harpoon attached to a sturdy oak shaft. A ‘drogue’ or drag, attached by a rope to the harpoon was thrown overboard from the whaleboat. Towing the drogue slowed and tired the whale and as it surfaced to breathe, additional harpoons and drogues were made fast.”⁶⁸ This method of whaling, like all others, required a great deal of patience from the hunters, as they would wound the whale with every opportunity until the whale ceased flight and remained on the surface.

When conditions were not favorable or when the whales were simply too big, the quarry could not be towed ashore alongside the boat. In such situations, alternative strategies for acquiring the whale could be employed. Whalers of the Kodiak area of the Gulf of Alaska would leave their wounded or dying prey, waiting and hoping that it would wash ashore within a few days. When poisons were used in the hunt, the whalers could predict how long it would take the wounded whale to die.⁶⁹ According to Robert Heizer’s study of subsistence whalers of Alaska and the North American Pacific coasts, poison made from the roots of aconite plants was spread on the weapon surface or the weapon is dipped into the poison.⁷⁰ These poisons did not cause instant death in large whales, but rather might cause: “...loss of balance, infection, and / or paralysis which could lead to drowning.”⁷¹ When poisons were used in whaling, the location of the weapon strike was more significant than usual:

Even a small amount [of poison] introduced into a sensitive area with conglomerations of blood vessels, such as the flippers, thoracic region, or the base of the brain, would spread rapidly through the body and

⁶⁸ J. Tuck and R. Grenier, *Red Bay, Labrador: World Whaling Capital A.D. 1550–1600* (St. John’s, Newfoundland: Atlantic Archaeology Ltd., 1989), 14.

⁶⁹ Yarborough, 71.

⁷⁰ R. Heizer, “Aconite arrow poison in the Old and New World,” *Journal of the Washington Academy of Sciences* 28, no. 8 (1938): 358–364; R. J. Berry, *The Natural History of Orkney* (London: William Collins Sons and Co. Ltd., 1985), 251. Some whalers, such as the Aleuts, Koniag, and Chugach Eskimo whalers of Alaska, claimed that their poison in fact came from “...the fat of corpses, especially those of successful whalers or other important people” (Yarborough, 69). Heizer says that the attribution of the poison to human fat probably was a deception used by some whalers to protect the actual source of the poison.

⁷¹ Yarborough, 70.

seriously disable a whale. Death would not necessarily have been instantaneous, but the introduction of a toxic substance could have contributed significantly to a successful hunt.⁷²

In a simple elaboration of the use of poisoned harpoons, Heizer found that Norwegians combined the lethal shot with the use of nets to block fjords where whales were struck.⁷³ If a whale were hit with a bacterially-treated weapon, using infected materials from dead whales or other animals, the whale could be left to drift until it died and washed ashore somewhere in the fjord. The combined use of nets and poisons was conducive to Norwegian coastal geography with its deep inland fjords. These simple hunting methods were practiced in countless variations by traditional hunters across the world. Approaches to the hunt were modified according to the available equipment, the species hunted, and variables such as weather, seasonality and location.

One last whaling strategy, common among northern whalers, is the harvest of young whales. Young whales are typically easier to approach, catch and butcher than their larger, more powerful parents. They are also choice prey because "...their meat and blubber are tastier and more tender."⁷⁴ Studies of traditional whalers have shown that hunters frequently choose to hunt young whales because they regularly stray close to the shore and they are more inquisitive.⁷⁵ Not only are small whales a preferred food, but the pursuit of small whales is far less risky for the hunters. Yearlings and whale calves, while still capable of thrashing and injuring men when they are wounded, do not pose the same threat as mature whales. They were also easier to kill since a harpoon can penetrate through the skin and blubber of a calf more easily than through the thicker blubber of an adult. Lastly, small whales were retrieved and towed to shore with far less effort than

⁷² Yarborough, 70; When whales were killed in this manner, special care was taken to carve away the infected area or any festering wounds to ensure that none who consumed the whale would be affected by poisons.

⁷³ Heizer, 1941, 13.

⁷⁴ Gedeon, quoted in Yarborough, 72.

⁷⁵ J. Savelle and A. P. McCartney, "Thule Eskimo Subsistence and Bowhead Whale Procurement," in *Human Predators and Prey Mortality*, ed. M. Stiner, 201–216 (Oxford: Westview Press, 1991); A. P. McCartney, "Whale Size Selection by Precontact Hunters of the North American Western Arctic and Subarctic," in *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, ed. A. P. McCartney, 83–108 (Calgary: University of Alberta, the Canadian Circumpolar Institute 1995); Fairley, 117. Any number of the aforementioned hunting strategies could be used on small whales.

large whales and thus less likely to be lost.⁷⁶ Archaeological evidence from the Canadian Arctic and Bering Strait zone reveals that the exploitation of whale calves, particularly Bowhead and Grey whales, was a regular strategy of prehistoric whalers. "In 1976–1978 participants in the Thule Archaeology Conservation Project...measured hundreds of whale bones of more than 600 animals found in several Thule sites on Somerset Island...Judging by their size, most of these bones (97–99%) belonged to immature animals and yearlings."⁷⁷ This pattern in archaeological materials reveals a clear reliance on small whales and tells of the necessary strategies of obtaining small whales at particular times of the year, during spring or autumn migrations. As will be seen in chapter six, the Norse may have practiced a similar strategy of whale hunting in the medieval North Atlantic.

The efficiency in butchering small whales also contributes to their attractiveness to hunters. Their smaller size ensured that butchery could be completed promptly and that little or no meat and blubber would spoil. Studies of Eskimo-Aleut hunters reveal that the combination of risks and returns clearly favored the pursuit and use of immature or small baleen whales over larger whales.

Efficiency in processing—related to animal size—is directly related to edible products of a large whale....In comparing fresh whales, those small ones that could be landed and processed quickly, with 'stinkers' or those, often large, animals that started decomposing between 24–48 hours, [Durham] estimated that about 50% of the small whales were edible or usable, whereas only 25% or less of the 'stinkers' were usable. In comparing fresh whales, less wastage is culled from small animals than from large ones.⁷⁸

Furthermore, despite the greater weight and quantity of potential resources from large whales, "...more skin and meat is discarded because it is too tough to eat."⁷⁹ These factors contribute to whalers'

⁷⁶ McCartney, 1995, 98.

⁷⁷ I. Krupnik, "Prehistoric Eskimo Whaling in the Arctic: Slaughter of Calves or Fortuitous Ecology?" *Arctic Anthropology* 30, no. 1 (1993b): 2.

⁷⁸ McCartney, 1995, 98. Earlier authors also noted the incredible stink of stranded whales. Dicuil, borrowing from Solinus, described the islands of Arabia: "...when the sea is rough great monsters are cast up on shore; when they decay and rot, the whole island is filled with a foul odour..." Dicuil, vii, 45; 87. Solinus called this locale 'Rotten-fish' island (n. 42–45).

⁷⁹ McCartney, 1995, 99.

considerations prior to a hunt and as a consequence, small whales are frequently the most desirable prey.

One of the earliest contentions raised against premodern whaling in the North Atlantic world was the implausibility of early hunters' ability to catch a whale at sea. As has been shown here, and as will be shown in the following chapters, killing a whale at sea was not necessarily difficult. Tracking and towing whales was more of a challenge, but medieval whalers even found solutions to those vexing problems. The strategies of traditional whalers are simple and learned and not reliant upon specialized technologies. Nothing would have stopped medieval whalers from obtaining their quarry, apart, perhaps, from those monstrous whales themselves which haunted North Atlantic waters. The archaeology of North Atlantic whale use further attests to the value of cetaceans in early northern economies and maybe even their pursuit at sea.

IMAGES



Figure 1: Franks Casket, front panel. Note *hronas* *hron* inscription along left edge of front panel.



Figure 2: Foshigarry, N. Uist, mattock, identified by Grahame Clark as a 'flensing mattock.'



Figure 3: Olaus Magnus, *Historia*, monstrous whales;
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 4: Olaus Magnus, *Historia*, waters off Denmark and Sweden;
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 5: Olaus Magnus, *Historia*, monstrous whale, the 'spouter';
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 6: Palaiokastritsa monastery museum, Corfu and its display of sea monster bones, a modern example of collecting the 'prehistoric bones' of a sea-beast.



Figure 7: Bestiary, 'Whale as island,' or aspidochelone. British Library, Harley MS 4751, Folio 69r., © The British Library Board. All Rights Reserved. Note that this whale displays the two principal behaviors of aspidochelone, namely the whale as island and the luring of prey to its mouth.



Figure 8: Olaus Magnus, *Historia*, collecting ambergris;
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 9: Thoracic vertebra chopping block, likely Sperm whale;
Pool 1660, Pictish/Viking interface.



Figure 10: Caudal vertebra cutting surface, likely Pilot whale;
Pool 1057, Pictish/Viking interface.



Figure 11: Long-handled weaving combs; Broch of Burrian, GB 87/99.



Figure 12: Scar boat burial, linen smoothing board; © Orkney Library and Archive, reproduced with permission of the Orkney Island Council.



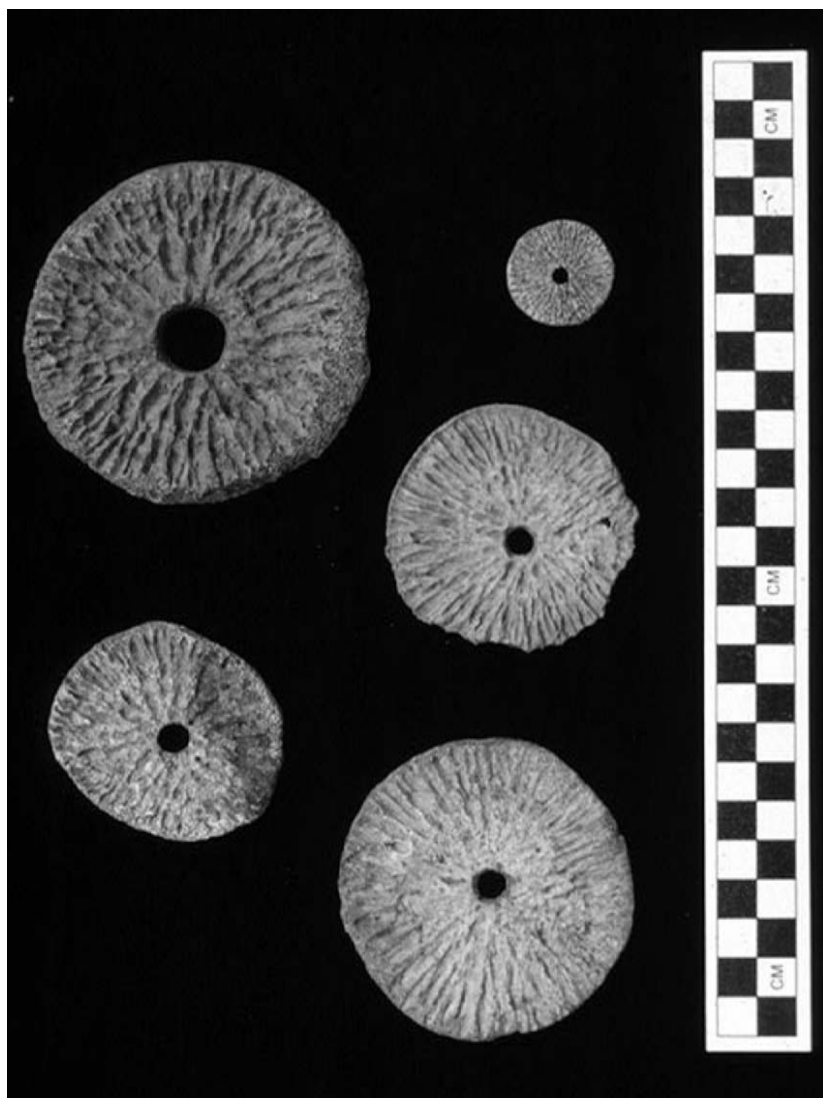


Figure 14: Perforated epiphysal discs, Pool; Pool 1515, 1509, 1845, 1874, 1865, from Pictish and Interface periods, possibly derived from Pilot whale, Bottlenose dolphin, Harbour porpoise.

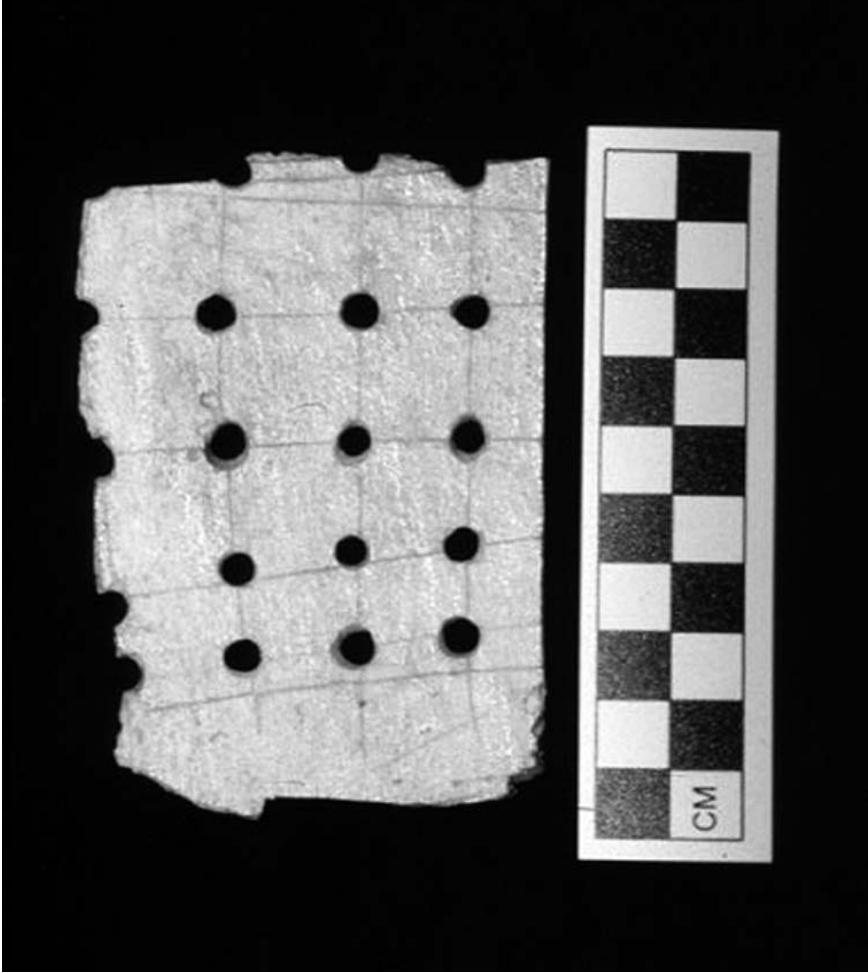
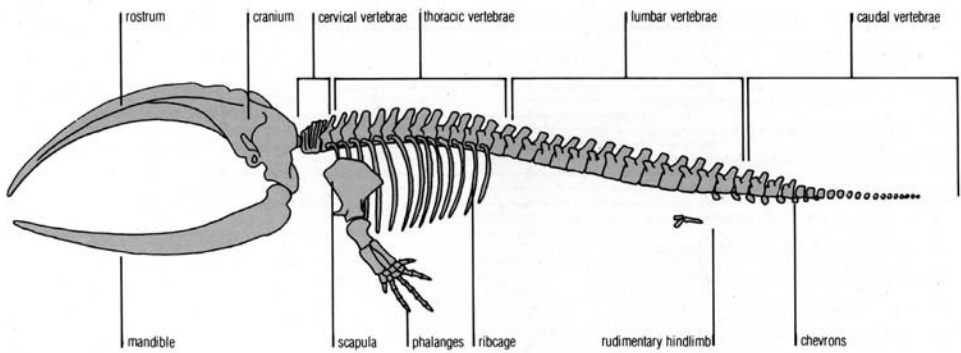


Figure 15: Gaming board, Norse, Brough of Birsay 274, Middle Norse horizon.

MYSTICETE



ODONTOCETE

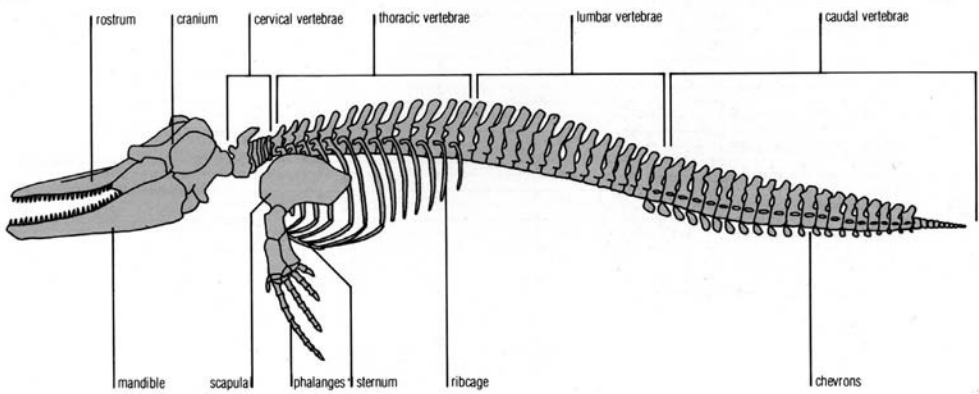


Figure 16: Skeletal structure, Mysticete and Odontocete, from Sea Guide to Whales of the World © Tom Ritchie and Hutchinson & Co., 1985.



Figure 17 and 18: St. Boniface Church, vertebral vessel; Orkney Museum, EN 615, Iron Age.



Figure 19: Clickimin cup, CLN 7972.



Figure 20: Clickimin cup, lateral view; CLN 7972.



Figure 21: Olaus Magnus, *Historia*, working whale bone or baleen.
© Hakluyt Society, reproduced by permission of David Higham Associates.

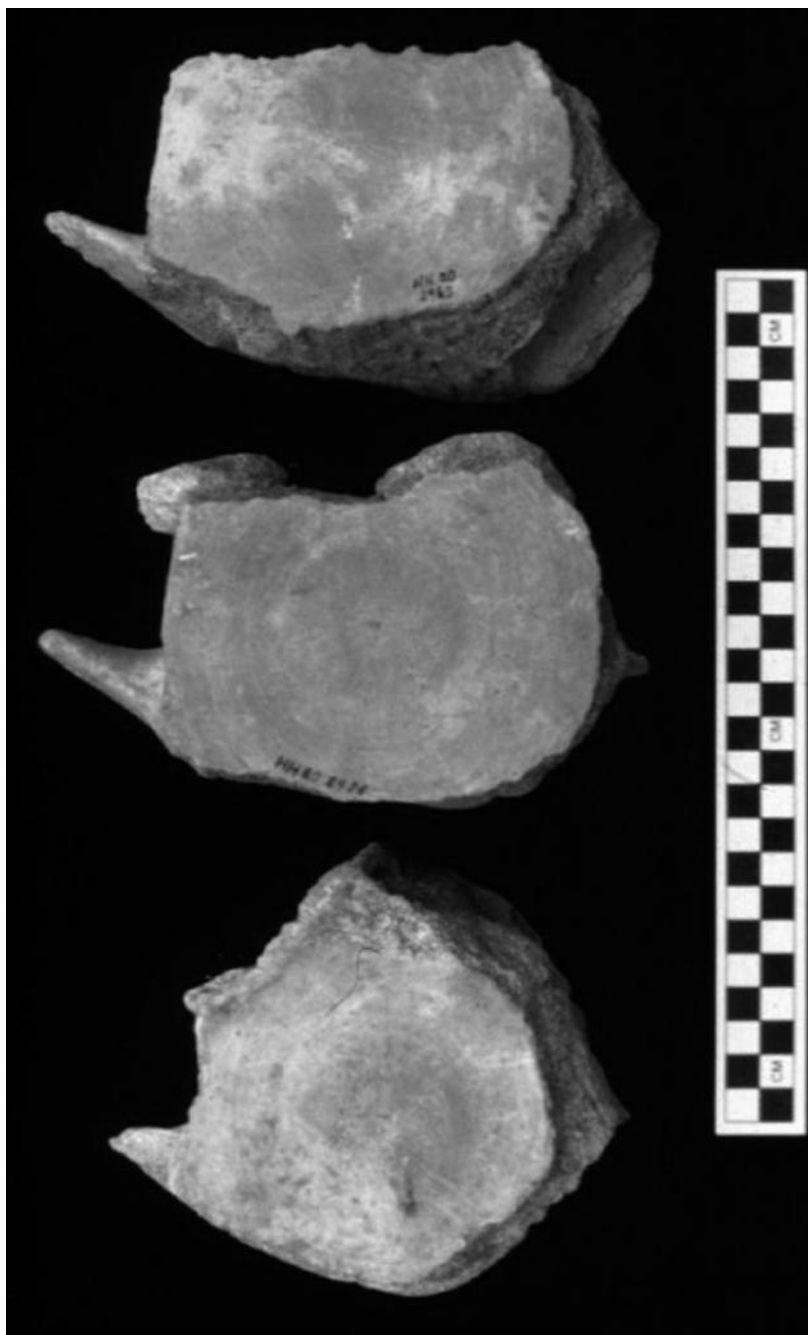


Figure 22: *Orcinus Orca* articulating lumbar vertebra, evidence of secondary on-site butchery; Howe 2945, 2926, 2963, late Phase 7 (ca. AD 200–300, Late Iron Age).



Figure 23: Comparative cetacean collection, Granton Research Centre, Edinburgh, Scotland.



Figure 24: Olaus Magnus, *Historia*, fending off attacking whales;
© Hakluyt Society; reproduced by permission of David Higham Associates.



Figure 25: Olaus Magnus, *Historia*, monstrous whale, perhaps a Humpback, swamping a ship.
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 26: Olaus Magnus, *Historia*, Whale bone house
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 27: *Jónsbók*, whale butchery; GKS 3269 a 4to; reproduced with permission of the Arni Magnusson Institute, Reykjavik, Iceland.



Figure 28: *Jónsbók*, whale butchery; AM 127 4to; reproduced with permission of the Arni Magnusson Institute, Reykjavik, Iceland.



Figure 29: *Jónsbók*, whale butchery; AM 350 fol.; reproduced with permission of the Arni Magnusson Institute, Reykjavik, Iceland.

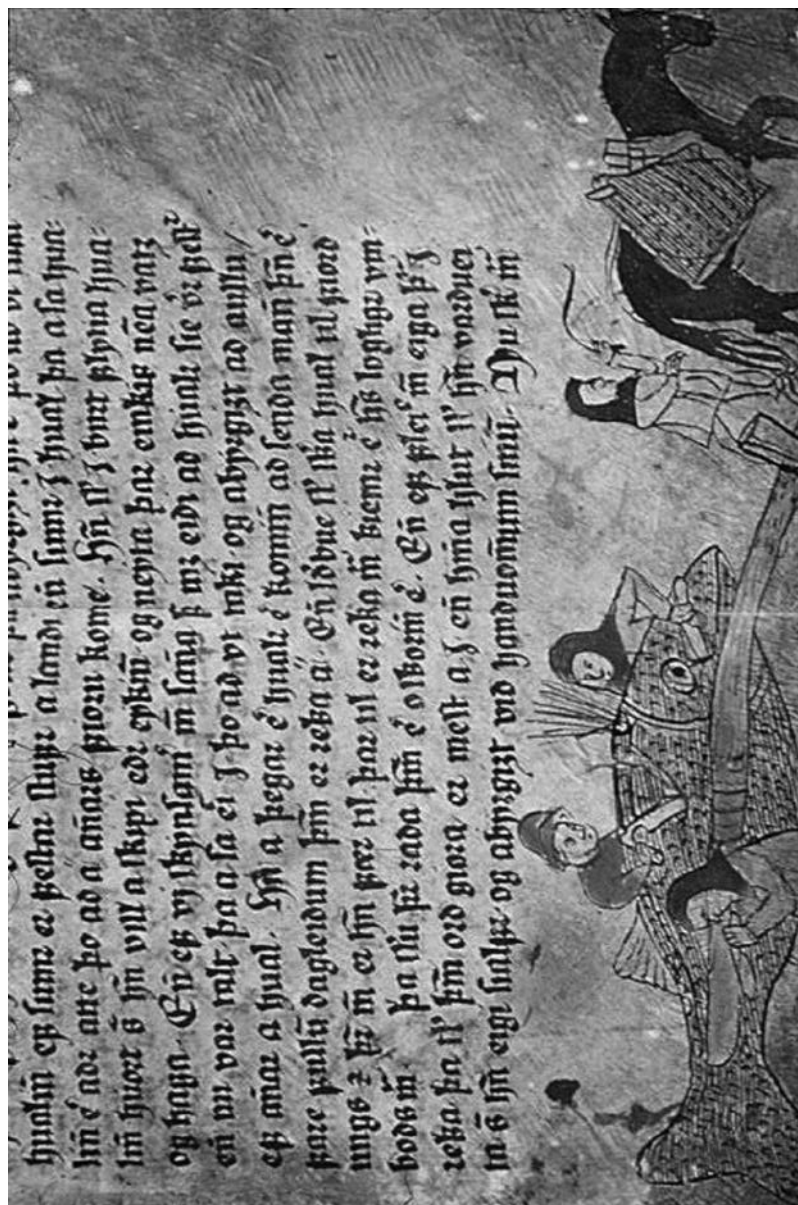


Figure 30: *Jónsbók*, butchery and transport of whale products; *Jónsbók*; AM 345 fol.; reproduced with permission of the Árni Magnússon Institute, Reykjavík, Iceland.



Figure 31: Olaus Magnus, *Historia*, whale butchery;
© Hakluyt Society, reproduced by permission of David Higham Associates.



Figure 32: Olaus Magnus, *Historia*, butchery of a monstrous whale;
© Hakluyt Society, reproduced by permission of David Higham Associates.

CHAPTER FIVE



ARCHAEOLOGICAL APPROACHES TO NORTH ATLANTIC WHALE USE

The medieval literature surveyed in preceding chapters abounds with monstrous whales, and Norse literature teems with the same sneering bristling creatures. All whales were not so malicious, though, and many texts reveal encounters with mundane and harmless whales, both at sea and more importantly, dead onshore. But while medieval authors luxuriate in description of monstrous whales, they often fall short when describing mundane species of whales and their uses. As will be seen in chapter seven, the Icelandic sagas frequently describe whales that have washed ashore, though rarely in any detail. These stranded whales almost always were single large rorquals that stranded during a great famine or hardship, on land over which ownership was contested. As a result, their division was never a simple matter, and they served as a pretext for some human drama, be it a verbal dispute, a legal debate, or occasionally a good bloody fight.

One such brawl over a stranded whale occurs in *Grettis saga*, when a famine provoked a skirmish over, and then on top of, the carcass of a stranded whale. When the rorqual was found, several chieftains along with their bondsmen rushed to the scene to butcher it. Over twenty men began the flensing and many more came to contend for the rights to the whale. A deadly battle erupted, fought with butchering axes and knives but also whale ribs and flesh as weapons of battle.

Thorgeir Flask-Back was the first to climb on the whale, and he attacked Flosi's servants. Thorfinn, ... was standing in a foot-hold cut into the whale just behind its head and was busy carving up the whale. Thorgeir said, 'I give you back your axe.' Then he struck at Thorfinn's neck, taking his head off. ... Flosi was standing on the beach when he saw this, and he urged his men to strike back. ... Few of the men had any weapons except for the axes and cleavers with which they had been cutting up the whale. The men of Vik abandoned the whale and retreated up the foreshore, but the Norwegian merchants were armed with proper weapons and were dangerous opponents. Stein, the captain, cut off Ivar Kolbeinsson's leg, but Ivar's brother Leif struck one of Stein's companions dead with a whale rib. They fought with everything they could lay their hands on, and men were killed on both sides.¹

This long bloody episode ended in a mocking verse: "I've heard how steely weapons were used, when whale-blubber was wielded at Rif Skerries. The fighters kept exchanging lethal whale-meat missiles. That's how these boors play the game of battle."² Entertaining as the battle is, the text more importantly shows us more detail on butchery than we see in most other sagas or laws.

For historians and archaeologists of whaling, our attention strays from the human drama and back to the massive, steaming, half-butchered hulk on the shore. We linger over the carcass and wonder what the fighters would do with those ribs that they had just used as weapons. Will they leave them on shore or will they be taken to a farm, to serve as a post or a tether or raw material for some fine tool? Will the vertebrae cut from those fine slabs of meat be left to roll about on the shore, or will they too be transported, maybe becoming stools in the byre? Will that mandible remain on the beach, buried and drying or will it serve some greater function back on the farm, maybe a linen-smoothing board for some fine Norse woman?

These questions, of course, are never answered for us in the sagas. Only rarely do medieval texts describe the mundane and practical matters of what happens to a whale after it beached and was butchered and divided, for such was not the typical stuff of literature. And such has not been the focus of most medieval historians or archaeologists. The archaeology of whale use presents challenges to historians and zooarchaeologists of the medieval North Atlantic, where whales were

¹ *Grettir's Sag*, trans. D. Fox and H. Pálsson (Toronto: University of Toronto Press, 1974), 19–20.

² *Grettir's Saga*, 20.

used for subsistence but not routinely enough to warrant clear and predictable patterns or readily apparent whaling strategies. Unlike some parts of the world, where selected species form the bulk of archaeological evidence, medieval North Atlantic whale use seems to have been 'species unspecific.' The sagas and other texts tell of a Norse preference for rorquals but whale remains on sites bespeak a more varied usage. Archaeological whale bones have the potential to tell us a great deal about whale exploitation, but first we must ascertain how to quantify bones that adhere to no predictable patterns of importation and use. What happened to the great stranded rorqual over which the whalers of *Grettis saga* fought? This chapter highlights what may have become of that great contested whale and its bones.

Whale bone is a strong and versatile material, a ready substitute for ivory or wood. It could be used for a variety of humble functional tools or the most elaborate and finely worked objects. Archaeological evidence provides dozens of examples of artifact types that are commonly produced from whale bone, but historical sources also preserve a record of whale bone objects which may have not survived archaeologically. *Hávarðar saga Ísfrðings* describes a whale rib boat-roller, used to shift ships to and from land and sea. While no archaeological examples are known, ethnographic examples of whale rib boat rollers are known in the Faroes: "the dried ribs [of Pilot whales] act as rollers over which boats are pulled up the shore; where the landing-place is steep, as on the little island of Myggenaes, they are permanently kept in position for this purpose, forming a kind of boat ladder."³ The *Hávarðar saga* excerpt also shows a secondary use of the rib, a use that would probably be undetectable archaeologically: "There was...a slipway with large whale-ribs dug in for rollers, their ends secured with stones...of Brand the Strong it is said that, running to the slipway, he tore up one of the rollers—it was a great whale-rib—and struck the foster-father of Hallgrim on the head with it."⁴ Travelers' accounts in the North Atlantic show a fascination with the many uses of what may have been an unusual raw material in other parts of the world. During his

³ N. Annandale, "The Survival of Primitive Implements, Materials and Methods in the Faroes and South Iceland," *Journal of the Anthropological Institute of Great Britain and Ireland* 33 (Jul-Dec. 1903): 251. See also A. Sandison, "Whale Hunting in the Shetlands," *Saga-Book of the Viking Club* 1 (1916): 42-53; J. E. Adams, "Last of the Caribbean Whalemen," *Natural History* 103, no. 11 (1994): 72.

⁴ *The Saga of Havarð the Halt*, trans. A. Boucher (Reykjavík: Iceland Review, 1986), 37-39.

travels through the British Isles in the twelfth century, Arabic geographer al-Idrīsī described the inhabitants of the ‘inner isles of Britain,’ who used whale bone as a substitute for wood for construction and a wide array of tools.

Icelandic and Norwegian laws, from the eleventh through thirteenth centuries, also cite the importance of bone, not as a raw material, but as an important gauge in the process of butchery and division. *Frostathing* law stated that the finder of a stranded whale must be given a finder’s fee, an allowance to include flesh taken from “the dorsal fin outward and backward along the sides and in to the bones.”⁵ *Gulathing law* grants a similar albeit more measured portion: “Let him take an arrow shaft and let him measure out a square as long as a man’s hand, and cut this down to the bone. [Let him take] the same length on the oar used amidships and let him place a rope around the oar where the blade begins, and let him cut down to the bone a rectangle as wide as the rope measure is long...”⁶ In these two accounts, bones were a guide for legitimate portions, and bones functioned similarly throughout other law codes, serving as testament when left onshore to a fair butchering process. To prove that one claimed a legitimate portion of a stranded whale, a finder or butcher was obliged to “cut [the whale] up before witnesses, or ... [to] leave behind the backbone, the head, and the tail fin...” to testify for him.⁷ These diagnostic bones allowed the type of whale which had stranded to be determined, to prevent disputes over the rights of ownership.



Texts provide some examples of the uses of whale bone, but this evidence pales when compared to the archaeology of whale use in the medieval north.⁸ “If our savage ancestors wanted to elevate themselves

⁵ *The Earliest Norwegian Laws, Being the Gulathing Law and the Frostathing Law*, trans. L. M. Larson (New York: Columbia University Press, 1935), 10.

⁶ *The Earliest Norwegian Laws*, 127, 150.

⁷ *The Earliest Norwegian Laws*, 127.

⁸ Approximately five hundred whale bone objects from approximately two dozen archaeological sites were analyzed by the author in the early stages of research for this study, between 1995 and 2000. Subsequently, an additional assemblage of approximately one hundred objects has been surveyed. Within the original assemblage, nearly one-quarter of all objects were deemed ‘unidentifiable’ as a clear artifact type.

above the floor while sitting, very little labour converted the large bone from the vertebre [sic] of the whale into a light and by no means uncommodious low stool. Or to meet another want the same bone was scooped out into a large dish.”⁹ Archaeologist Françoise Henry, working in Ireland in the 1940s, likewise knew such uses of whale vertebrae: “We were plagued during the whole of the excavation by the presence of a dead baby whale on the shore, and having sat every day during my stay on a stool made of the vertebra of a whale, I am prepared to expect the islanders at any period to have put various parts of the skeleton of a whale to all sorts of uses.”¹⁰ The majority of prehistoric and medieval whale bone objects produced across the North Atlantic world were not the craft of highly skilled specialists. They were humble tools, produced to meet specific local needs, like vertebral stools of Dennison’s savage ancestors or Henry’s smelly seat. Whale bone objects from most sites were domestically produced like those from the Iron Age site of Howe in Orkney.

[Bone] was a material which was in reasonable supply, could easily be worked and the artefacts could be readily replaced. From the artefactual evidence bone-working also required no special skills or tools and was a craft that was in the main non-specialist. On the whole, bones were simply modified to produce the required tool, such as the cutting off of a central rib on a scapula to make a shovel.... The standard of bone-working at Howe was basic and simple, reflecting the dominance of functional items in the assemblage.¹¹

The simplicity of bone artifact production at Howe is mirrored throughout most of the prehistoric and medieval sites of Orkney and the North Atlantic. The following descriptions of common whale bone objects illuminate, but hardly exhaust, the variety of tools and implements produced in whale bone, with examples drawn largely from archaeological sites from prehistoric through medieval Orkney. Many of the whale bone artifacts examined here are ubiquitous objects that transcend periodization. There is little complexity or individuated style in the scraping out of a vertebra for use as a vessel. The result is that

⁹ Walter Traill Dennison, unpublished notes on artifacts from Sanday, provided by Tom Muir, 1998.

¹⁰ Henry, cited in J. Fairley, *Irish Whales and Whaling* (Belfast: Blackstaff Press Limited, 1981), 98.

¹¹ B. Ballin-Smith, ed., *Howe: Four Millennia of Orkney Prehistory* (Edinburgh: Society of Antiquaries of Scotland, 1994), 183.

objects produced in Neolithic Skara Brae bear the same basic form as objects produced four thousand years later. While texts on whaling provide invaluable insights and information, artifacts speak volumes on the routine reliance upon whales in domestic and daily contexts.

The most basic medieval whale bone artifacts would be recognized by any archaeologist, as they are common tools, fashioned as needed, found across the North Atlantic. The most common objects found on early sites include vessels, typically fashioned from vertebrae, chopping blocks and cutting surfaces, digging tools, textile production and maintenance implements including combs, smoothers, rubbers, as well as keys and padlocks, toys and gaming pieces, stakes or tethers, awls, and pegs. Most of these basic items have no particular cultural affinity and are objects that were produced as needed, particularly in regions where wood was scarce. Some of these objects could display secondary characteristics, such as designs, markings or means of attachment to some other implement, that identify them from a certain period or place.

No use of whale bone seems more common than as a simple cutting surface. Virtually any substantial bone could suffice in this regard, including ribs, vertebrae, crania or mandible fragments. Figures 9 and 10 show just a few types of bones used as ready-made cutting surfaces, from a small lumbar vertebrae of a dolphin to a massive thoracic vertebrae from a baleen whale. We can imagine these bones used as a soft yet stable cutting surface for leather or bone working, food preparation or a host of crafts. The large thoracic vertebra of Figure 9 was no delicate cutting surface, but the diminutive vertebrae from Pool (Fig. 10) certainly was suited for finer work.

While vertebrae are the raw material for many of the most prominent and identifiable whale bone objects, ribs were the bone of choice for numerous artifact types. Digging tools and mattock heads (Fig. 2) were commonly produced from halved ribs, often derived from large cetaceans. Women's tools used in weaving and cloth production are among the most common worked rib tools found from the Iron Age and Norse periods. Long-handled combs (Fig. 11) also known as weaving combs, are typical finds on Iron Age sites from Shetland to the Hebrides and beyond, and also were made in southern England's pre-Roman Iron Age.¹²

¹² I. Hodder and J. W. Hedges, "Weaving Combs": Their typology and distribution with some introductory remarks on date and function," in *The Iron Age in Britain*:

These detailed and diverse combs were used in the preparation of wool and to beat the weft fibers in vertical loom weaving.¹³

Norse weaving kits include numerous whale bone objects associated with linen production. The most recognizable Norse object produce in whale bone is the linen smoothing board (Fig. 12), fashioned from ribs or mandibles of the largest whales.¹⁴ The linen smoothing board could be thought of as a central object within a high status Norsewoman's cloth production and maintenance kit, most often found deposited in graves: "...[Objects] selected for inclusion in female graves most often reflect the central role played by women in textile production, from carding and spinning to weaving and sewing. Indeed, the additional presence of a whalebone plaque and/or a weaving-sword in a woman's grave in Scotland marks it out as being of the highest rank, as at Scar."¹⁵ While originally thought to be a sort of plate, Thomas Petersen identified the elite objects as smoothing boards by comparison with ethnographic examples of smoothing boards from nineteenth century Sweden.¹⁶ The boards were used along with a glass linen smoother which would be heated and used as an iron upon the garments.¹⁷ Only sixty smoothing plaques are known from the North Atlantic world, with the majority

a review, ed. John Collis, 17–28 (Sheffield: University of Sheffield, Dept. of Prehistory and Archaeology, 1977).

¹³ MacGregor attributes the variation in comb forms to a functional difference between long and short handled combs: "Among the combs from the Broch of Burrian, Orkney, a significant disparity was noted between those with long handles and short teeth and those with comparatively short handles and longer teeth. It was suggested... that this variation might indicate some difference in function, the longer-toothed implements perhaps having been used for combing the wool preparatory to spinning..." A. MacGregor, *Bone, Antler, Ivory and Horn: The Technology of Skeletal Materials Since the Roman Period*. Totowa: Barnes and Noble Books, 1985), 190.

¹⁴ O. Owen and M. Dalland, *Scar: A Viking Boat Burial on Sanday, Orkney* (Edinburgh: Tuckwell Press, 1999), 81. These objects survive archaeologically only in whale bone, although wooden boards are thought to have been made as well. These boards typically have an undecorated working surface, fairly limited in size, surrounded by an incised border. A signature feature is the parallel beasts' heads which adorn the top of the board.

¹⁵ J. Graham-Campbell and C. Batey, *Vikings in Scotland: An Archaeological Survey* (Edinburgh: Edinburgh UP, 1998), 150. Nelson Annandale's study of Faroese ethnography and 'primitive implements' notes: "A bone implement which has become obsolete in the Faroes with the upright loom is the bone weaver's sword, which was carved out of a Pilot Whale's jaw or rib, and specimens of which are still occasionally to be found..." (255).

¹⁶ Owen and Dalland, 1999, 77.

¹⁷ The use of linen smoothing boards was not daily or routine, but for ceremonial events: "It is a reasonable supposition... that the finest carved whalebone plaques were used for pressing precious linens for ceremonial occasions, perhaps especially the linen

found in Norway.¹⁸ One of the finest examples known from the North Atlantic world occurs at Scar, a Norse boat burial for three individuals, including an older woman, on the north coast of Sanday in Orkney.¹⁹ While found in a Norse burial context in Orkney, it is more likely that this high status object was produced in Norway and imported along with other personal effects to Orkney, where its owner was finally buried. Just as whale bone was a popular material for linen smoothing boards and weaving implements, it was also the raw material of choice for Norse tools used in flax working, the first stage of linen production. No Norse woman's textile kit would be complete without a scutching knife or weaving batten, both also commonly produced from whale bone. The scutching knife was used to beat away the rough fibrous hull of the flax stalk.²⁰ These tools (Fig. 13) previously have been misidentified as cleavers, butter pats or, more plausibly, weaving battens.

elements of the 'best clothes' worn to sow the flax seed or get married in" (Owen and Dalland, 1999, 79–80).

¹⁸ Owen and Dalland, 1999, 80; Owen and Dalland provide a list of the known whale bone plaques, including 48 from Norway, 5 from Sweden, 2 from Denmark, 5 from Scotland, and 1 apiece in Ireland and England. Since Greenland, Iceland and the Faroes are thought to have been locales less hospitable to colonizing families, the locations of these items typical of elite women are sensibly located in these territories closest to or part of the Scandinavian homelands. For more on colonists, see S. Goodacre et al., "Genetic evidence for a family-based Scandinavian settlement of Shetland and Orkney during the Viking periods," *Heredity* 95 (2005): 129–135.

¹⁹ The board at Scar only measures 185–210 mm in breadth, with a height of 266 mm; Owen and Dalland, 1999, 74.

²⁰ The small Pool object seen at the bottom of Figure 13 (Pool object 4657; 86 mm × 23 × 15) is in fact a fairly simple rib fragment from a large species of dolphin. This item has not been shaped or finely crafted. It is broken on two ends and may represent a secondary use or may simply have been used by sheer convenience. It is identifiable as a scutching blade merely by the row of small striations that characterize wear patterns on similar tools. In fact, this object may have been used as another type of linen-production tool and then reused later in flax production. The Skaill knife (middle object, Fig. 13), described in the excavation catalog as a 'butter pat,' is a more finished object with a defined handle and working blade. This item also appears to have been fashioned secondarily. A third example of a possible scutching knife, and the most exquisite, is found at St Boniface Church (top object, Fig. 13) although unlike the previous Norse examples, this unique object was contextually dated to the Early Iron Age, ca. 750–250 BC. The identification of this object is problematic, not due to its context, but because of its function. Flax is a crop that is predominantly associated with the Viking arrival and Norse settlement in Scotland: "On present evidence it seems that it [flax] was likely to be an introduction by the Norse to Scotland" (Graham-Campbell and Batey, 213). The other two implements from Pool and Skaill fit well within their contexts and ascribed functions. This finely made item, however, is somewhat problematic because flax is so strongly associated with the Norse period and not the Iron Age; G. J. Barclay, "The Neolithic," in *Scotland: Environment and Archaeology, 8000 BC–AD 1000*, eds. Kevin J. Edwards and Ian B. M. Ralston, 143 (New York:

Once thought to be spindle whorls, perforated epiphysal discs are found on both Pictish and Norse sites and remain one of the more enigmatic whale bone categories (Fig. 14).²¹ These items are made from the unfused or partially fused vertebral epiphyses of cetaceans, often from species of dolphin.²² The function of these perforated epiphysal discs remains unclear. One of the smallest perforated epiphyses, from the site of Pool, Sanday, was only two millimeters thick, derived from a small cetacean, perhaps a Harbor porpoise. The delicacy of this tiny object would forbid any functional use, and it may have been a child's toy, imitative of a larger tool.²³ Annandale's study of 'primitive implements' in the Faroes referred to similar objects as children's toys:

The smaller [vertebrae] are dragged about as 'toy carts' by the children, who have never seen real carts, and who make another toy by threading one of the smallest vertebral epiphyses—thin discs of bone that lie between the bodies of the vertebrae in the region of the tail—upon a loop of wool or string. The ends of the loop are held, as wide apart as possible, in the two hands, and it is caused to rotate in such a way that it becomes completely twisted, the discs then revolve rapidly, producing a humming sound, if the hands be alternately approached to and drawn apart from one another.²⁴

Other recreational objects, such as draught or playing pieces, were crafted from whale bone and are found on numerous sites across the North Atlantic. Numerous flat discs or draughts pieces are known from England to Shetland and across the Norse world. Twenty-two simple, undecorated, domed playing pieces from Scar, Orkney were deposited in a bag nearby the man in the Scar boat burial. These domed pieces

John Wiley and Sons, 1997). It is possible that this item was imported to Papa Westray from an early site elsewhere. The early Neolithic site of Balbridie, Kincardneshire, Scotland produced evidence of cultivated flax, so such items may have been common elsewhere, but not in Orkney.

²¹ These objects, like other simple whale bone tools, pervade many periods, from the Iron Age through the Pictish periods of Scotland, and perhaps later.

²² Pool's Pictish phases and Pictish-Norse interface included four of these objects varying in size from diminutive Harbor porpoise (PL 1865, diameter 28 mm) to a Pilot whale (PL 1509, diameter 89 mm).

²³ The wear on these items is often minimal. There may be some wear along a single side of the central perforation, which may be accompanied by wear on the outer edge of the object, as if a cord or string had been tied through the perforation and looped around the object's edge. However, the wear is irregular and is not found on all discs.

²⁴ Annandale, 1903, 251.

may have been used in playing the game *hnefatafl*.²⁵ Although a gaming board was not found in the partially destroyed grave, each playing piece had a perforation allowing a metal peg to be inserted, which would have held the pieces onto a gaming board like that from the Brough of Birsay (Fig. 15), also crafted from whale bone.²⁶

The objects discussed thus far are fairly typical examples of uses of whale bone across not only Orkney but also the North Atlantic. Vertebral vessels, produced from the most delicate *Delphinidae* vertebrae to the massive caudal vertebrae of *Balanopteridae*, are the most common whale bone artifacts. Their ubiquity has led many archaeologists, when confronted with a large vertebral fragment or even a large whale bone object, to immediately ascribe it the category of vessel. This tendency has led to misidentifications both of bones and objects. The authors of the report on à Cheardach Mhor on South Uist, Western Isles, expressed consternation in the category of whale bone vessels:

Whale bone was used in various ways, from the hollowed-out vertebra post-holes of the Central Area [of the site] to the shaped and handled ‘cups’.... The use of these last artefacts, recorded from various sites in the north and west is problematic. A people who made and used quite sophisticated pottery would hardly tolerate such an ungainly drinking vessel, but, filled with animal or fish fat, these would serve as lamps and could provide a feeble light. Another use has been suggested for these so-called cups, that of a pivot to carry the framework of a door, but those found at à Cheardach Mhor appear to be too fragile for such a function.²⁷

As Young and Richardson concluded, some vertebral vessels were not used as vessels. This convenient catch-all category is a formal not a functional description.²⁸ In fact, some ‘vertebral vessels’ are neither vertebrae nor vessels.

²⁵ See Owen and Dalland, 1999, 128–132 for additional discussion of the game and more examples of contemporary gaming pieces, not all whale bone.

²⁶ Owen and Dalland, 1999, 127. Birsay board, GB 179; 100 mm long by 65 mm wide by 3 mm thick.

²⁷ A. Young and K. M. Richardson, “À Cheardach Mhor, Drimore, South Uist,” *Proceedings of the Society of Antiquaries of Scotland* 93 (1959–60): 147–150.

²⁸ In addition to the suggestions that vessels could be cups, storage vessels, door pivots, the GUS report includes the suggestion, borrowed from Nyegaard, that they also could have served as chamber pots. I. B. Enghoff, *Hunting, fishing and animal husbandry at The Farm Beneath The Sand, Western Greenland: An archaeozoological analysis of a Norse farm in the Western Settlement*, Man & Society 28 (Copenhagen: Danish Polar Center, 2003), 40.

Vertebrae are among the most common cetacean skeletal remains present on prehistoric and historic North Atlantic archaeological sites (Fig. 16).²⁹ Their high meat value rather than their material utility makes them more common waste bones than ribs, bones of low meat value but high material utility. Whale bones that are imported to an archaeological site can be classified in several ways, most notably as

²⁹ Vertebrae, the component bones of the backbone, provide support and protection for the spinal column and serve as attachment or articulation points for muscles or bones, while allowing variable ranges of motion along the spinal column (Fig. 16). The vertebral column of the whale, running from the whale's skull to the end of its tail, is composed of four regions: cervical, thoracic, lumbar, and caudal. Whales do not possess the sacral vertebrae common to other mammals; some would consider the lumbar region, which is numerically great in some cetacean species, to also include modified sacral, or pelvic, vertebrae. The total number of vertebrae and the number within each region varies dramatically by species; see L. Watson, *Sea Guide to Whales of the World* (New York: E. P. Dutton, 1981). Likewise, the shape of the vertebrae and the orientation of its component parts make vertebrae the most important bones for species identification of archaeological materials. The individual vertebra has five major components: the body or centrum, the round drum-like body which forms the core of the bone; two epiphyses, flat discs which cap either face of the centrum; two transverse processes, wing-like structures which radiate from the sides of the centrum; a dorsal process which projects from the top of the centrum; and the neural arch, the structure upon which the dorsal process sits. The transverse processes and the dorsal process serve as articulation points for ribs and as attachments for muscles, tendons or ligaments. The diameter, length and shape of the centrum and the length, shape and directional orientation of processes are important factors in identifying the species and anatomical origin of a bone. For example, a perfectly or nearly round centrum is likely to be a lumbar or caudal vertebra, while more angular centruns belong to thoracic vertebrae. Cervical vertebrae are distinctive because they are thin and squared without individually formed processes. The direction in which the transverse processes are angled also divulges something of the vertebral origin, although more in terms of the location of the vertebra within its region of the vertebral column. For example, "In the Sei Whale, . . . the transverse processes of vertebrae 1 through 6 are directed slightly forward; those of vertebrae 7 and 8 are directed laterally; and those of vertebrae 9 through 14 are directed slightly backward" (Spencer Wilke Tinker, *Whales of the World* (New York: E. J. Brill, 1988), 40). While these features are important and useful in identifying intact vertebrae, the majority of archaeological vertebrae survive as portions of centrum with partial or broken processes. While Northern Bottlenose whales have a centrum body that is much longer than it is wide in diameter, Sei whales may tend towards the opposite, with shorter centruns and more exaggerated lateral diameters, so that the centrum looks dorso-ventrally compressed. Bottlenose dolphin centruns tend to be of nearly equal size—in diameter and width—for the length of the vertebral column. Killer whale vertebrae are identifiable because they are the most robust vertebrae of that size; a mature Killer vertebra, when fully fused, could not be confused with any other species. It is too small to be from a Minke and it is not the right shape to be a Northern Bottlenose or another *Ziphiidae*, for it is more equally balanced in length and diameter.

high or low meat value bones.³⁰ Vertebrae may have been imported along with the valued portion of meat and blubber in the region of the dorsal fin, which explains their frequency on sites.³¹ When bones of low meat value are found on archaeological sites, it may be assumed that they were not transported along with quantities of meat.³² Large bones were imported when there were specific reasons for doing so, such as the need for construction material for buildings or as raw material for artifact production. Architecturally significant bones, the largest bones like mandibles, ribs or cranial fragments, were not incidental materials or byproducts of meat procurement. They were valued enough as architectural materials to merit importation to a site, unlike vertebrae which may have been transported incidentally with meat.³³ While vertebrae's forms limit their potential as raw materials for fine items, they were clearly useful for a range of common utilitarian items.

³⁰ Vertebrae and ribs are the most important whale bone raw materials found in North Atlantic archaeological assemblages. This likely has as much to do with the importation of meat as with the importance or value of the bones. Even lower-value bones provide some meat, although most areas of the body, including the head, cervical vertebrae, sternum, scapula and flippers, produce only negligible quantities (Savelle and Friesen, 715).

³¹ Bones with the highest relative meat values are the lumbar, caudal and thoracic vertebrae, followed closely by ribs. The available meat from the lumbar and caudal region is approximately twice that available from the thoracic vertebrae and the ribs.

³² Evidence from Skara Brae shows that the smallest whale bones often were burned as fuel. The infusion of oil within whale bones would make them fairly well-suited for this purpose. Bones of the pectoral assemblage, including phalanges and carpal bones may have been those most commonly used in fire. They rarely show up in archaeological assemblages as they have limited applicability as raw materials.

³³ Alan Savelle has characterized the architectural utility of whale bone in two distinct categories: frame utility and bulk utility (Savelle, 1987, 870). Frame utility refers to the use of bones as major structural elements, such as roof or wall beams, while bulk utility refers to the bones used as wall-building materials or as structural braces. One of the most notable examples of bulk utility is found at Orkney's preeminent archaeological site, Skara Brae, where original excavator V. Gordon Childe reported a "whale's head, ... seen *in situ* reposing above the passage roof [A] (V. G. Childe and J. Wilson Paterson, "Provisional Report on the Excavations at Skara Brae and on finds from the 1927 and 1928 Campaigns," *Proceedings of the Society of Antiquaries of Scotland* 63 (1929): 242). Trial excavations outside of the Skara Brae site directed by Colin Richards in the 1990s yielded another large skull fragment, similar to that depicted in Figure 14 of Childe's interim report. The Bay of Skaill upon which Skara Brae is located may have been a perfect beach from which large bones of stranded or hunted whales could be transported easily from shore to site. "[It] appears that after the removal of easily detached edible parts such as the tongue from cetacean carcasses, heads will be transported significant distances from the butchery site only in exceptional circumstances, due to the low meat utility and the relatively high weight of bone and inedible gristle" (Savelle and Friesen, 720).

Vessels most often were fashioned from the lumbar or caudal vertebrae of large baleen whales or Sperm whales, although smaller vessels from bones of dolphin species are also common. Many vessels could not have been used for liquid containment because of their porous nature and were likely used for bulk or dry storage, or even as architectural sockets or pivots. Residue analysis typically is not performed on these vessels, so the nature of their contents and thus their use has not been firmly established. Many speculate that the perforated and unperforated epiphysial discs, so common on Iron Age sites and identified earlier as possible toys, could have been lids for vertebral vessels. In addition to the supposed lids, some vessels have small handles, although of little functional value.

A few notable examples of whale bone vessels from Orkney and Shetland illuminate the variations in this type of object. A stray find (Figs. 17, 18) from the shore along St. Boniface Church on the small island of Papa Westray provides an exceptionally fine, albeit fragmentary, example of a handled vertebral vessel.³⁴ The fragment is unlike other vertebral vessels of contemporary sites, with the deliberate and careful fashioning of its handle and rim, worked from the intact transverse process and epiphysial disc of the vertebra.³⁵ The handle of this piece is one of its most interesting features, designed possibly as a means of securing a lid rather than as a functional means of holding the vessel, owing to the small diameter of the handle's perforation.

Sometimes a whale vertebra vessel is not in fact a vertebra. In his published report on Clickimin broch in Shetland, J. R. C. Hamilton described the Clickimin cup (Figs. 19, 20) simply as a 'whale bone

³⁴ According to Grahame Wilson's worked bone and antler report, St. Boniface Church produced only a dozen pieces of worked bone, of which six were fashioned from whale bone. Graeme Wilson's analysis of the St. Boniface Kirk bone assemblage includes the following six whale bone objects within the worked bone inventory: SF 183—fragmentary weaving sword; SF 122—weaving baton; SF 141—subtriangular fragment of cetacean bone, vertebra; SF 144—cetacean bone tool fragment; SF 133—subtriangular fragment of cetacean bone; SF 39—large fragment/rib. See G. Wilson, "The Worked Bone and Antler," in *St Boniface Church, Orkney: Coastal Erosion and Archaeological Assessment*, ed. C. Lowe, 142 (London: Alan Sutton, 1998). Among this small assemblage was the object most readily identifiable with St. Boniface Church, the whale bone scutching knife (Fig. 13, top), an object that is arguably among the finer bone objects of the Orcadian Iron Age.

³⁵ The bone which produced this object was likely a caudal vertebra, given the close location of the transverse process, which forms the handle, to the epiphysial disc. The size of the bone may indicate derivation from a large *Mysticete*, perhaps family *Balaenidae* or *Balaenopteridae*, in short, a Right, Blue or Fin whale.

cup.’ The Shetland Museum catalogue reference states that the object derives from the cervical vertebra of a Long-finned Pilot whale.³⁶ The object, though, is not constructed from a vertebral centrum, but rather from a more peripheral skeletal element, either a hollowed radius of a medium-sized cetacean or from a phalanx of a massive baleen whale. The Clickimin cup is unique within the broader corpus of North Atlantic vessels, as most vessels or cups of its size are constructed from vertebrae rather than appendicular bones.

Whale bones were worked and used like any other animal bone, so why then should whale bones be any more problematic than other animal bones in their analysis? The tools and techniques used in whale bone working were the same as those used for other large mammal bones, but the material also has some unique benefits and constraints.³⁷ Because of its cancellous structure and infusion with oil, some whale bone may not have needed softening prior to working, while other bones, such as mandibles, may have been too hard to work without preparation.³⁸ Unlike other mammal bones, which may be removed from the animal, cleaned or even boiled to excarnate and eliminate residual oils, whale bone must be exposed and dried for a period of months or years in order to rid the bones of excess oil.³⁹ The excarnation of whale bones is not difficult but the expulsion of oil could take time. On Arctic Canadian sites, Savelle notes that whale bone required months or years of exposure before it could be easily worked.⁴⁰ Most whale bones cannot be boiled to facilitate oil removal, as the bones are far too large to fit in any medieval much less modern receptacles. Time and natural extrusion were the best way to rid these bones of oil.⁴¹ But it

³⁶ J. R. C. Hamilton, *Excavations at Clickhimin, Shetland* (Edinburgh: Her Majesty’s Stationary Office, 1968), Shetland Museum catalogue entry, record 4827.

³⁷ Y. Hallén, “The use of bone and antler at Foshigarry and Bac Mhic Connain, two Iron Age sites on North Uist, Western Isles,” *Proceedings of the Society of Antiquaries of Scotland* 124 (1994): 194.

³⁸ MacGregor, 1985, 63.

³⁹ See chapter six and the discussion of whale bone houses for Olaus Magnus’ report on the exposure of whale bone for architectural uses.

⁴⁰ J. M. Savelle, “The Role of Architectural Utility in the Formation of Zooarchaeological Whale Bone Assemblages,” *Journal of Archaeological Science* 24 (1997): 870.

⁴¹ Museums which collect and display whale bones know the extraordinary difficulties involved in stripping whale skeletons. The treatment of whale bone varies from collection to collection, with equally varied results. While some collection managers choose to ‘cook’ whale bones in baths of water and, effectively, detergent, others prefer a more passive means of treatment, such as burial. Some collections even resort to flesh-eating beetles to speed the process. The results of such methods vary dramatically.

is questionable whether medieval craftsmen or farmers waited so long to use whale bones (Fig. 21).⁴² While most tools and objects display a high level of wear or erosion of cancellous bone, certain objects show cancellous structures which clearly have been compressed while in a soft state.⁴³ The wear on some long-handled weaving combs, for example, does not show a rigid cancellous surface that has been broken or worn away, but rather compression which occurred only when the bone was still soft. Whale bone chopping blocks or bones used for bulk utility, such as skull fragments, ribs and vertebrae, might allow the use of fresh bones, but only for activities requiring little finesse. Regardless of their precise treatment or use, it is undeniable that whale bone was a significant resource across many North Atlantic sites.



Zooarchaeologists analyze the faunal assemblages on archaeological sites in order to reconstruct ancient environments, populations, diets and foodways. “Traditionally, archaeozoology . . . has revolved around precise identifications and population studies, . . . the investigation of taphonomic processes, . . . the reconstruction of past environments, seasonality studies and so on. Archaeozoology has been . . . anatomical, evolutionary and

Some whale bone emerges from such cleaning in a friable, delicate state, crumbling to the touch. Some bone emerges clean, only to seep oil, staining the bone, for years thereafter. Nearly all whale bone following such treatments, with or without oil, retains its distinctive cetacean odor, to which this author can attest personally. When the Royal Museum of Scotland received the skeleton of a stranded male Sperm whale, affectionately nicknamed ‘Moby,’ in April 1997, the skeleton went on display in the Grand Hall of the Royal Museum shortly after acquisition. After a few days of oil exudation and much stink, to the olfactory offense of museum visitors, Moby was relegated to the Granton Centre for further treatment, where he continued to release oil for another year. Personal communication Jerry Herman, 1997.

⁴² Figure 21, from Olaus Magnus’ *Historia*, depicts either bone working or, as suggested by Stuart Frank, baleen working. It remains, though, one of the few images of the working of hard tissues from whales in the premodern era.

⁴³ Experimental techniques are the optimal way of demonstrating this effect, but due to the difficulty of obtaining fresh whale bones for samples, such tests have not been possible. From the author’s own experience with relatively fresh bones, one to three years butchered, the compression of soft bone from simple handling resembles the compression seen on some combs. No firm rule can be given for when a bone is fully dried and considered usable, but some bones were clearly used in a relatively ‘fresh’ state.

environmental zoology practised on archaeological faunal remains.”⁴⁴ Assemblages reveal the relative proportion of animals as resources, the utility of the animal on site, as subsistence fare or market fodder, and the typical age, size, even health of the various animal populations. In addition to essential data, zooarchaeologists also look for broader cultural meaning within faunal assemblages:

The materialist perspective of most animal bone archeologists leads them to be concerned primarily with questions of diet and environment. This channels the interpretative focus towards the animals as the unit of study and emphasizes information about how the animals appear, where they may be found, how they should be raised, and what their useful products may be. Any faunal study overlooking these aspects would be remiss, but it is equally important in a fully anthropological approach to consider how animals were conceptualized by the people who interacted with them.⁴⁵

This approach demands application and integration of zooarchaeological data with historical or folk information on the interactions between humans and animals. With our knowledge of how medieval peoples perceived whales and how they thought whales should be used, there is an obligation to analyze archaeological whale bones and more broadly whale use with reference to these cultural perceptions. “[F]ew investigators move to the more subjective...realm of ‘folk science.’ Paradoxically, however, this is the method most likely to take us beyond a nuts and bolts, purely materialist approach to animal bone questions and contribute more effectively to historical research agendas.”⁴⁶ Another reason makes an integrative approach with historical and cultural evidence more appropriate. Whale bone cannot yet be quantified in a manner comparable to terrestrial mammal remains. The data provided by whale bone do not allow reliable estimates of whale use, so whale bone must be used in more innovative ways to provide insights into how whales fit in historical cultures and economies.⁴⁷

⁴⁴ K. C. MacDonald, “Archaeozoology as Anthropology?” *Archaeological Review from Cambridge* 10, no. 1 (1991): 60.

⁴⁵ B. Hesse and P. Wapnish, *Animal Bone Archaeology* (Washington D.C.: Taraxacum Inc., 1985), 5.

⁴⁶ P. Wapnish, “Towards Establishing a Conceptual Basis for Animal Categories in Archaeology,” in *Methods in the Mediterranean: Historical and Archaeological Views on Texts and Archaeology*, ed. David B. Small, 233 (New York: Brill, 1995).

⁴⁷ It is clear that whale bones occur on archaeological sites for different reasons than do the bones of other mammals, so comparing whales with terrestrial mammals is difficult. Most terrestrial mammals were butchered or processed at or near a settlement site and discarded bones ended up onsite in midden deposits. It is from such deposits

Whale bone seemingly is without parallel as a raw material in the Middle Ages, yet little comprehensive zooarchaeological analysis has been done on this versatile resource.⁴⁸ Some archaeologists attribute this paucity of cetacean analysis on the terrestrial focus of the discipline of archaeology: "Archaeologists working in coastal environments have been...slow to recognize the potential in assessing archaeological signatures associated with different types of large sea mammal scavenging and hunting."⁴⁹ Since whale bone artifacts and debris from butchery and bone working are infrequently identified by species or family in archaeological reports, our knowledge of whale exploitation often exists only at the level of the presence or absence of whale bones on any given site. One zooarchaeological assessment of whale bones from the L'Anse aux Meadows site concluded: "Whale occurs in all oceans. It is difficult to say which species, one or more, might be represented by

that archaeologists typically calculate the quantity of bones and the reliance upon certain species. The number of animals used during a given period at a given site can be determined from systematic identification of specific skeletal elements. NISP, the number of identified specimens, and MNI, the minimum number of individuals, as are calculated for most animal species from archaeological middens or other cultural deposits, cannot be attained as easily from whale bones as from other animals (S. M. J. Davis, *The Archaeology of Animals* (New Haven: Yale University Press, 1987), 35). It is also difficult to compare the contribution of cetaceans, especially large whales, to the contribution of terrestrial mammals. One large whale, such as a Fin whale, could provide the same amount of resources as twenty or more cattle, yet is only represented statistically by one individual. When cetaceans are not identified in site reports by species or even by size, we have no knowledge whether that cetacean was a Harbor porpoise or a Blue whale. The comparison of other mammals is more straightforward because most mammals do not display such incredible variety and variability within their order. While the calculations of NISP and MNI are important, the relevance of these statistics to cetacean quantities on sites is limited because the frequency of cetacean remains is only meaningful when the species or families of those cetaceans are known. More useful for cetacean analysis is evaluation of the meat yield, but isolation of meat yields can be difficult when species are as numerous and varied as they are on North Atlantic sites. Sites with more limited species present, as in Canadian Arctic sites where Bowheads or Belugas predominate, offer greater opportunity to calculate all of these data. It should be noted that the problems of whale bone identification and quantification have less to do with post-depositional damage or destruction of the bones than with the nature of whale use itself.

⁴⁸ J. Mulville, "The Role of Cetacea in Prehistoric and Historic Atlantic Scotland," *International Journal of Osteoarchaeology* 12 (2002): 34–48; M. Gardiner, "The Exploitation of Sea-Mammals in Medieval England: Bones and their Social Context," *Archaeological Journal* 154 (1997): 173–195.

⁴⁹ D. Yesner, "Whales, Mammoths, and Other Big Beasts: Assessing their Roles in Prehistoric Economies," in *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, ed. Allen P. McCartney, 151–152 (Calgary: University of Alberta, the Canadian Circumpolar Institute, 1995).

your fragments.”⁵⁰ A second report concurred: “The species of whale from which the whalebone fragments derive cannot be determined.”⁵¹ Almost thirty years later, not much progress has been made. While cetacean archaeology has grown as a subspecialization of zooarchaeology, whales remain sparsely integrated within many archaeological reports. The 2003 zooarchaeological report from The Farm Beneath the Sand, or GUS (Gården under Sandet), in the Norse Western settlement of Greenland, reveals some advancement in the recognition of whale species in the identification of three species.⁵² The report concludes, though, that “Whales are [problematic] in any discussion of marine/terrestrial ratios. It is impossible to get an impression of the importance of these large animals as a source of food for the GUS people.”⁵³ While Enghoff’s analysis of the GUS whale bone is exceptional, and her sentiment on the problems of whale bone archaeology is perfectly correct, it also reflects the essential problem for cetacean zooarchaeologists, namely that whale bone is statistically unrepresentative and difficult to identify by species.

The greatest challenge in assessing the use of whales and other large marine mammals on archaeological sites originates in the differences between the butchery of whales and other animals.⁵⁴ While the bones of domesticated animals such as cattle, sheep and pigs are commonly found in refuse pits and middens on settlement sites, whale bones, like the bones of other large wild prey such as elephants or giraffes, are

⁵⁰ Rolf W. Lie, cited in A. Stine Ingstad, *The Discovery of a Norse Settlement in America: Excavations at L’Anse aux Meadows, Newfoundland 1961–1968* (Oslo: Universitetsforlaget, 1977), 266.

⁵¹ Haakon Olsen, cited in A. Stine Ingstad, *The Discovery of a Norse Settlement in America: Excavations at L’Anse aux Meadows, Newfoundland 1961–1968* (Oslo: Universitetsforlaget, 1977), 267. Most of the whale bones in the Ingstads’ L’Anse aux Meadows report are described in the “various samples” section of the Ingstad finds catalogue quite simply as bags of whale bone.

⁵² “There are at least three species of whale in the material: 1) Longfinned pilot whale or killer whale, 2) White-beaked dolphin/or Atlantic white-sided dolphin, and 3) Bowhead whale. Northern right whale may also be present” (Enghoff, 40).

⁵³ Enghoff, 90. Christyann Darwent noted in a review of Enghoff’s exceptional report that Enghoff’s original statement in Danish, translated into “Whales are jokers” should be read as “whale remains are problematic,” a more fitting translation and one that fits precisely with the point made in this chapter. Christyann M. Darwent, “Review of *Hunting, Fishing and Animal Husbandry at The Farm Beneath The Sand, Western Greenland: An archaeozoological analysis of a Norse farm in the Western Settlement*,” *Arctic* (March 2005).

⁵⁴ D. Perkins Jr. and P. Daly, “A Hunters’ Village in Neolithic Turkey,” *Scientific American* 219, no. 5 (November 1968): 96–109.

rarely found in domestic refuse contexts.⁵⁵ Wild animals are often field butchered, their bones left at the butchering site rather than being transported along with meat and other valued products. The size of the animal and its bones are clearly factors in deciding whether bones will be transported or not.⁵⁶ If meat is difficult to butcher from a large terrestrial mammal bone, only then might bone be transported along with the meat. But whale butchery is rather different from that of terrestrial animals. "The ease of hide and flesh removal in cetaceans is much greater than for terrestrial mammals, and subsequently has a much greater potential influence on the resulting zooarchaeological assemblages."⁵⁷ Whale meat and blubber were stripped easily from large whales at a coastal butchering site and transported to a settlement. Excess bone and waste materials could be left along the coast since the transport of such bulky and heavy materials was unnecessary for basic subsistence needs.

The transportation of specific bones depends not only upon specific group needs, based on seasonality, population size and cultural choices, but also upon the animal. Large cetacean bones may be transported from one carcass and abandoned from the next. Every culture, if not every community, may have different traditions or rules regarding the transportation of cetacean bones from a kill or scavenging site.⁵⁸ As

⁵⁵ For an example of the zooarchaeological investigation of typical medieval domestic environments, see P. Crabtree, "The Archaeozoology of the Anglo-Saxon Site at West Stow, Suffolk," in *Archaeological Approaches to Medieval Europe*, ed. K. Biddick, 223–235 (Kalamazoo, MI: Medieval Institute, 1984).

⁵⁶ Alan Turner, "Sample Selection, Schlepp Effects and Scavenging: the Implications of Partial Recovery for Interpretations of the Terrestrial Mammal Assemblage from Klasies River Mouth," *Journal of Archaeological Science* 16 (1989): 1–11; James F. O'Connell and Kristen Hawkes, "Hadza Hunting, Butchering, and Bone Transport and their Archaeological Implications," *Journal of Anthropological Research* 44, no. 2 (1988): 113–161; James F. O'Connell, Kristen Hawkes and Nicholas Burton Jones, "Hadza Scavenging: Implications for Plio/Pleistocene Hominid Subsistence," *Current Anthropology* 29, no. 2 (April 1988): 356–363; Henry T. Bunn, Laurence E. Bartram and Ellen M. Kroll, "Variability in Bone Assemblage Formation from Hadza Hunting, Scavenging, and Carcass Processing," *Journal of Anthropological Archaeology* 7 (1988): 412–457.

⁵⁷ J. Savelle and T. Max Friesen, "An Odontocete (Cetacea) Meat Utility Index," *Journal of Archaeological Science* 23 (1996): 719.

⁵⁸ For patterns in transportation of large bones, we may look to ethnographic and archaeological examples of megafauna exploitation. The closest comparison to whale use and procurement is the exploitation of large land mammals, such as elephants or giraffes, which pose similar problems of resource transportation. In cases such as Hadza elephant transportation, appendicular skeletal elements are more highly valued than the axial skeleton. This is the opposite of cetacean skeletal exploitation, for the cetacean appendicular skeleton is so limited; regardless of the skeletal elements begin

will be seen in chapter eight, the Norse and Icelandic laws for whale butchery could be precise and care was taken, at least theoretically, to avoid personal property in butchery. Whale butchery was a coastal activity, and while secondary butchery of portions of whales could occur on sites, only rarely do archaeologists find evidence of whale butchery at settlements. The three articulating Killer whale lumbar vertebrae shown in Figure 22 provide uncommon evidence of secondary processing of a sizeable whale on an archaeological site.⁵⁹ Because of this selective transportation of bones, the whale bone found on archaeological sites generally does not represent the total number of whales used at a particular settlement. Rather than finding regular skeletal elements indicative of routine cetacean butchering at settlement sites, the surviving cetacean bones are artifacts, bone-working debris or secondary butchery debris. Even the smallest cetaceans were field butchered, as small cetacean bones appear as irregularly as those of larger animals.⁶⁰

transported, the largest bones of elephants, like whales, are usually left at the kill site once the meat has been stripped away. "Whether or not groups return appendicular skeletal elements to base camps must be considered in light of both retrieval costs and benefits. For coastal Eskimo groups, living in a highly seasonal environment, the bones come to shore with the whale, and are used as structural elements and sources of tools, even if they have relatively limited nutritional value. . . . [In] the case of Pygmy groups that actively hunt elephants, skulls, scapulae, and pelvic bones are always left behind, upper limb bones are almost always retrieved, and lower limb bones show intermediate rates of retrieval. Thus, the failure to return appendicular bones to camp must be viewed in the context of not only the relative benefits of the marrow that they contain . . . , but also the cost of transporting the bones" (Yesner, 1995, 152–153).

⁵⁹ These bones, Howe 2945, 2926, 2963, Late Phase 7, were cut from a large portion of a Killer whale brought to the Iron age site at Howe, Orkney, located less than a mile from the modern coastline.

⁶⁰ In addition to assessing the presence of imported bones on archaeological sites, we also must take account of those bones or skeletal elements which rarely or never appear. Among the most conspicuously absent skeletal elements of whales on archaeological sites are teeth and baleen. The absence of whale teeth on most archaeological sites, either worked or unworked, is surprising but may be indicative of the value of objects produced from ivory. Such items may have been passed on as heirlooms rather than left as refuse or discarded items on abandoned sites. In Orkney, the location of some of the North Atlantic's largest medieval whale bone assemblages, few sites have produced whale ivory. Eleven unworked Killer whale teeth were found at the Broch of Borwick, Western Mainland, and Gurness broch produced a pin head or bead of whale ivory. GUS in Greenland is one of the few sites to have produced "a large number of baleen fragments," preserved in permafrost conditions (Enghoff, 40). Unfortunately, the baleen fragments "were not included in the counts [of whale bones present] but do bear witness to the exploitation of baleen whales at GUS" (40).

Because most cetaceans are not butchered at settlement sites, the whale has been described as an 'archaeologically invisible' resource: "The reason for the low incidence of whale bone is similar to that for large terrestrial animals. The bones are often so huge that it was not worthwhile carrying these heavy pieces back to the camp. Unless the ivory shows up all these animals are archaeologically either under-represented or 'invisible'."⁶¹ This is the essential archaeological problem of whales. Tons of whale products, including meat, blubber and soft tissues, may have been used on a site with little physical evidence remaining. The evidence that does remain tells little of how whales were acquired, since hunting and scavenging usually cannot be distinguished from physical evidence on whale bones.

Savelle's ethnoarchaeological study of Inuit Narwhal and Beluga processing on Somerset Island in Arctic Canada illustrates this virtual 'invisibility' of whales on archaeological sites:

....because of whale anatomy, the vast majority of edible products can be recovered with little bone removal. In the present study, 30% of the edible beluga whale and 70–75% of the edible narwhal products were removed. However, for both species the only bones associated with these removed edible products were those associated with the flippers and, secondarily, the posterior caudal vertebrae. Consequently, the amount and type of bone present at processing, caching, or residential sites may bear very little relation to the actual amount of the whale utilized for subsistence purposes.⁶²

The coastal butchering locations described by Savelle demonstrate the problems faced by archaeologists. These butchering stations are scattered with abandoned, bleached skeletons of Narwhals and Beluga whales. For the medieval North Atlantic, comparable ancient sites of whale processing are rarely if ever found. With the inundation and destruction of many Iron Age and early medieval coastal sites along the North Atlantic and North Sea, we are hard pressed to begin to locate ancient butchering or oil rendering sites.⁶³

⁶¹ A. Smith and J. Kinahan, 'The Invisible Whale,' *World Archaeology* 16 (June, 1984), 95.

⁶² J. M. Savelle, "An Ethnoarchaeological Investigation of Inuit Beluga Whale and Narwhal Harvesting," in *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, ed. Allen P. McCartney, 143 (Calgary: University of Alberta, the Canadian Circumpolar Institute, 1995).

⁶³ H. Lamb, *Historic Storms of the North Sea, British Isles and Northwest Europe* (New York: Cambridge University Press, 1991). The best archaeological examples of whale processing

Some ancient beaches or receded ocean beds have been known to reveal evidence of scavenged or butchered whale skeletons. The ancient ocean floor now known as the Carse of Stirling, the plain through which the River Forth flows in eastern Scotland, has yielded twenty large whale skeletons, including a Blue whale, with Neolithic butchering tools such as antler mattocks and stone points, preserved *in situ* alongside the skeletons.⁶⁴ The remains of several canoes were also found near the skeletons, which could have been used in the rounding up and harpooning of whales trapped in the shallows. Another whale butchering site has been found in Dengemarsh, Kent, dating to the Anglo-Saxon or Middle Saxon period. Two partial skeletons, thought to be Right whales, were found preserved underneath a storm shingle, with evidence of butchering marks found on the bones.⁶⁵ Preserved beachscapes, butchering and rendering locations provide us with rare glimpses into the possible means of cetacean acquisition.

Acquisition and butchery are major concerns of analysis, but so too is basic identification of bones. Cetacean anatomy makes archaeological reconstruction of whale use more difficult than the analysis of other animals. No brief discussion can adequately describe cetacean anatomy, as the variety of shape and size among whales prevents any universal description. The skeletal structure of cetaceans varies distinctively between family and species within the order *Cetacea* (Fig. 16). Furthermore, cetaceans' skeletons, made of large and light bones, diverge radically in their form and composition from terrestrial mammals' skeletons. Skulls are larger and lighter than in most other mammals, vertebrae are bulkier to support the massive tail muscles used in locomotion, and the appendicular skeleton is extremely small relative to body size.

The differences between whale and land mammal skeletons is particularly notable in both the morphology and composition of bones. Whale bones have relatively thin outer surfaces of cortical bone with a "spongy inner structure made up of delicate webs with large spaces

stations are the early Basque whaling stations in Red Bay, Labrador, excavated by James Tuck; see J. Tuck and R. Grenier, *Red Bay, Labrador: World Whaling Capital AD 1550–1600* (St. John's, Newfoundland: Atlantic Archaeology Ltd., 1989).

⁶⁴ D. Morris, 'The Whale Remains of the Carse of Stirling,' *The Scottish Naturalist* 150 (1924), 137–140.

⁶⁵ M. Gardiner, John Stewart, and Greg Priestley-Bell, "Exploitation of whales in Anglo-Saxon England: some evidence from Denge Marsh, Lydd, Kent," *Medieval Archaeology* 42 (1999), 96–101.

between them.”⁶⁶ Unlike other mammal bone, which is characterized by a hard cortical exterior and a marrow-filled channel, whale bone has no interior void, and instead is composed of spongy and porous cancellous material filled with oil. The oil both insulates and aids in buoyancy, allowing the whale to adapt to the incredible pressure changes which it encounters in diving. Bones are so saturated that unless they are very well dried and exposed, oil seeps through the bone surface, discoloring it and collecting into fatty deposits: “...bones derived from fresh carcasses require several years of natural weathering before they are free of meat and other soft tissues and suitable for use.”⁶⁷ Extreme sexual dimorphism compounds difficulties in analysis, as the sex of a whale dramatically affects its length, weight and the size of its bones. The greater body weight of males places greater stress on the bones, prompting more massive development in comparison to lighter female skeletons.⁶⁸ Likewise, the maturity of an animal must be considered alongside its sex. Full physical cetacean maturity can take anywhere from two to twenty years depending upon the species, although sexual maturity is achieved much earlier, with an average of approximately four years for males and females.⁶⁹ All of these variables can be misleading in identification. Individuals of a certain species may be more

⁶⁶ Watson, 32.

⁶⁷ Savelle, 1997, 870.

⁶⁸ While a fully mature male Blue whale may measure up to thirty-one meters, a corresponding female may grow only to twenty-six meters. Likewise, Sperm whales may vary from fifteen to twenty meters for males, and from eleven to seventeen meters for females. Smaller species also exhibit this variation. Long-finned Pilot whales range from six to almost nine meters for males, while females measure only from four to six meters. While overall body length accounts for part of the variation, body weight can be even more extreme. Male sperm whales average forty tons, while females are virtually half of that weight. Pilot whales exhibit similar variability, with male weights averaging four and a half tons and females at two tons (Measurements from Watson, 85, 171, 206).

⁶⁹ General estimates of maturity can be ascertained by bone fusion, which occurs slowly in large whales. In identifying disarticulated, archaeological bone, the fusion of the epiphysis with vertebrae is the most prevalent indicator of cetacean maturity. Within its first six months of life, a whale may double its length and increase its weight tenfold. During this time, the bones are growing at an incredible rate and large whales can gain up to one and three-quarter inches in length per day. Bone fusion may begin early in life, proceeding at the outermost extremes of the skeleton and moving inwards, but fusion is a long process. While a whale may grow to nearly its full physical size before its full maturity, bone can remain unfused. Slijper estimates maturity takes anywhere from 1.5 to 6 years for most species; the main outlier is the male pilot whale, which he says attains sexual maturity at 13 years. E. J. Slijper, *Whales* (Ithaca, NY: Cornell University Press, 1979), 384.

or less robust and in disarticulated bones, individual animals who vary radically may be misidentified by species.

The problems of species analysis of whale bone can be legion. Fragmentary or highly worked bones often cannot be identified to species type. Whale bone is occasionally misidentified or is generically catalogued as mammal bone, and it can also be confused with antler. Despite the fact that different species of cetaceans display clear anatomical variation, disarticulated bone artifacts, following deposition, fragmentation or other taphonomic processes, may lose their anatomical distinctions. Because of these difficulties, many archaeological reports simply forego species identification for cetacean bone, instead merely noting the presence of large or small species.⁷⁰ Species analysis is key if we are to know whether certain whales were deliberately chosen and sought out, or whether use was purely random.⁷¹

Problems in identification are also created by inadequate zoological collections. Modern comparative collections of mammal skeletons, containing specimens gathered over the past three hundred years, are

⁷⁰ Despite the fact that different species of cetaceans display clear anatomical variation when seen in comparative contexts, their disarticulated, deposited and fragmented bones often lose diagnostic features. Vertebrae for example are easily identified when the centrum, neural or transverse processes survive, but other bones, even when not fragmented, can display few diagnostic qualities. For the best comprehensive analysis of cetacean vertebrae, see E. Buchholtz and S. Schur, "Vertebral osteology in Delphinidae (Cetacea)," *Zoological Journal of the Linnean Society* 140 (2004): 383–401.

⁷¹ Case studies for species analysis were conducted by the author on whale bone from approximately a dozen archaeological sites of Iron Age and Norse Orkney, with five sites chosen as preeminent exemplars of whale use, namely Skaill, Deerness, the Brough of Birsay and Birsay Bay, Howe, and Pool. These four Mainland sites and the last site from Sanday were chosen for securely stratified artifact contexts and the varied assemblages of bone from each site. Other Orcadian sites offered greater quantities and varieties of whale bone objects and waste, but could not provide firm archaeological contexts, given their excavation history, for the objects. The following basic points of whale use were discerned. Whale bone assemblages revealed no clear differences and no clear preferences in the species of whales used from Iron Age through late Norse Orkney. These assemblages revealed that the proportions of species identified reflected little more than population proportions expected in the waters surrounding Orkney. The species present on most Orcadian sites ranged from small porpoise to the largest baleen whales, so the bones were basically representative of the overall population of cetacea of the North Atlantic. No single species of whale was preferred by either culture, and both groups made regular use of medium-sized whales, particularly Killer whales and Pilot whales, among the most populous species in northern waters. Common use of species is hardly surprising, as they naturally used the animals most readily available to them. This brief case study, though, was based on approximately two hundred whale bone objects, so more comprehensive studies must be done across the North Atlantic.

used by zooarchaeologists to identify bones found on archaeological sites (Fig. 23). The collections for cetacea, though, may not represent whale species as they existed a millennium ago, prior to industrial whaling.⁷² Anthropogenic change seems to have altered cetacean size so much that some comparative collections may mislead rather than identify in disarticulated morphological analysis. Massive whale skeletons collected in the nineteenth century can dwarf modern specimens. Additionally, comparative whale collections may contain individual animals that are not clearly identified or misidentified by age or sex or species. Right and Grey whales offer particular problems in North Atlantic contexts, as few control samples exist as a secure basis for comparison. Furthermore, few comparative collections contain skeletons of all species found in a given area, and even fewer collections offer examples of male and female individuals, or examples of different maturities within any given species. Great variability can occur within one species due to maturity, sex and differences among individual animals, pods and populations. Museums have long maintained cranial, tympanic and dental collections for the autopsy of dead whales, but these skeletal elements are not common on medieval sites. Post-cranial materials dominate archaeological assemblages and comparative collections often do not reflect archaeologists' needs. As a result, osteometric or morphological analysis of whale bones is seen by many as an approach prone to error. Comparative collections simply may not reflect past populations accurately enough to serve as representative guides to identification.

Recent genetic analysis of whale bones from Red Bay Labrador illustrates some of the aforementioned problems of morphological identifications of whale bone.⁷³ Rastogi et al. revisited previous osteological analyses of twenty-one humeri recovered from the sixteenth century Basque whaling station at Red Bay. Earlier studies identified thirteen Right whales and eight Bowheads from the assemblage,

⁷² Some collections, such as the British Museum of Natural History, contain whale bones of such size that comparable animals are unknown today. The BMNH collection includes a Sperm whale mandible from an individual of approximately 80' in length; today's largest Sperm whales would compare at only 60'. In short, the largest animals, and their genetic material, were hunted out of existence and out of the gene pool. On anthropogenic evolution, see E. Russel, "Evolutionary History: Prospectus for a New Field," *Environmental History* 8, no. 2 (April 2003): 204–228.

⁷³ T. Rastogi, et al., "Genetic analysis of 16th-century whale bones prompts a revision of the impact of Basque whaling on right and bowhead whales in the western North Atlantic," *Canadian Journal of Zoology* 82 (2004): 1647–1654.

whereas Rastogi's DNA analysis revealed only one Right whale and twenty Bowheads.⁷⁴ However, as Rastogi notes, "the discrepancy between osteological and molecular species designation is likely due to the small number of skeletons available as reference material for osteological examination."⁷⁵ Also, humeri are difficult to identify in the largest cetaceans. Rastogi admits that they found no "species-specific bone morphology between bowhead whale humeri and right whale humeri. Osteological polymorphism owing to age or [sex] may have also complicated species identification."⁷⁶ Despite these problems, osteometry and morphology should not be wholly cast aside for alternative methods. Rather, new approaches must be found to analyze the bones turning up on archaeological sites every year and to revisit those bones that languish in museum stores without proper analysis.



Despite all these difficulties in the analysis of whale bone, even minimal identification of species and bone type can help to discern the patterns of cetacean exploitation from various sites. If random bones from a variety of cetacean species are found on a site, one might conclude that whale use was dictated by unpredictable strandings. In contrast, if large numbers of bones from a single species or family are found on a site, or if bones from a particular age group of cetaceans are dominant, a more deliberate strategy of exploitation may be considered. The archaeological site of Pool on the island of Sanday, Orkney, may reveal evidence, albeit minor, of such an exploitation pattern.

Pool was a large coastal settlement situated on the Bay of Pool, and occupied continuously from the Iron Age through the Norse period. Although nearly half of the original site is lost to the sea, what remains is evidence of a once prosperous Pictish settlement that suffered ruin and

⁷⁴ Subsequent analysis from additional western North Atlantic Basque sites revealed similar results: "Preliminary results indicate that of 188 bones examined from 18 sites, 183 are from bowhead whales, 1 is from a right whale, and 4 represent other species" (Brenna A. McLeod, Timothy R. Frasier, and Bradley N. White, "Reply to the comment by Romero and Kannada on 'Genetic analysis of 16th-century whale bones prompts a revision of the impact of Basque whaling on right and bowhead whales in the western North Atlantic,'" *Canadian Journal of Zoology* 84 (2006): 1067.

⁷⁵ Rastogi et al., 1650.

⁷⁶ Rastogi et al., 1650.

was replaced by a lively and far wealthier Norse farming community.⁷⁷ Pool's whale bone assemblage spanned the life the site, including the Pictish and Norse periods. Pictish objects were typical, namely numerous epiphysal discs, vertebrae, mattocks and tools.⁷⁸ The Interface period, spanning the Pictish decline and the Norse settlement, roughly the ninth century, included the largest number of whale bone objects.⁷⁹ The object types included three epiphysal discs, as were also found in the Pictish phase, four worked vertebrae including two that had been used as chopping blocks or cutting surfaces, and two worked ribs.⁸⁰ The Norse periods at Pool offered the most finely worked whale bones, including a worked blank which may have been intended for a set of clamps, a decorated casket mount and a fragmentary scutching knife or weaving batten.⁸¹

The unique aspect of the assemblage at Pool was not in the types of objects, but in the derivation of the bones. Most whale bone assemblages from Orkney show proportions of mature to immature whales that reflect proportions you would typically see in nature, with adults outnumbering immature animals. The maturity of the animal is discerned by the fusion of the bones, as unfused bones indicate juvenile animals, and among the identifiable bones at Pool, immature whales significantly outnumbered the mature.⁸² All of these immature animals, mostly

⁷⁷ J. Hunter, et al., "Pool, Sanday: a Case Study for the Late Iron Age and Viking Periods," in *Beyond the Brochs: Changing Perspectives on the Later Iron Age in Atlantic Scotland*, ed. Ian Armit, 177 (Edinburgh: Edinburgh University Press, 1990).

⁷⁸ Pool's assemblage was studied at the National Museum of Scotland and the Orkney Museum. Phases 6.5–6.7; epiphysal discs: PL 3171, 1845, 1874, 1865; vertebra: PL 629; mattocks or digging tools: PL 5579, 5491.

⁷⁹ At least seven of the whale bones came from species of dolphin, and three objects may have been fashioned from the bones of a single sperm whale.

⁸⁰ Phases 7.1–7.2; epiphysal discs: PL 148, 1509, 115, 5489; worked vertebrae: PL 4026, 1115, 1116, 1057, 1660; worked ribs: PL 1659, 2979.

⁸¹ Phases 8.2.2–9; perforated vertebra: PL 4939; worked blank: PL 4494; casket mount: PL 4576; fragmentary scutching knife: PL 4657.

⁸² In the Pictish period, only one large species, a Sei whale, was identified at Pool. Apart from the Sei, four identifications were made in the Pictish phase, including two medium-sized cetaceans—a Killer whale and a Pilot whale—and two small species—a Bottlenose dolphin and a Harbor porpoise. In the Norse period, no small cetacean species were identified; the only two species identified, a Sei whale and a Pilot whale, were, respectively a large and medium-sized cetacean. The Interface period sees the greatest level of cetacean exploitation at Pool, with ten identified species, with a majority of medium-sized cetaceans. This Pictish-Norse interface produced two Minke whale bones, five Pilot whale, and one unidentified *Delphinidae*. A Risso's dolphin was also identified, as were two Sperm whale bones. When looking at the species identifications alone, the sample size is small to declare any definitive change of use. All but two objects out of

dolphin species and Pilot whales, came from the Pictish and especially the Interface Pictish-Viking period, although most of the immature or unfused bones from the Interface were objects of a distinctive Pictish type.⁸³ While the reasons behind bone survival are varied and complex, one explanation for the unique proportion of young whale bones is a deliberate acquisition strategy focusing on juveniles.

This pattern at Pool becomes even more complex when one considers the history of the site and the period within which these immature bones were deposited. A thriving Pictish settlement rose up at Pool around earlier Iron age structures: “Structural evidence from Pool shows an expansion of the site in the 6th century AD...with the addition of chambers and passageways to the existing buildings, and extremely tightly-laid flagged floors.”⁸⁴ From the late seventh through the early ninth centuries, the so-called Interface or transition period between Pictish and Norse settlements, the Pictish economy was in decline: “[r]ubbish begins to spread across the southern part of the site, [and] one by one the cellular units fall out of use or collapse...” and “midden spill[ed] from the central walled area and spread across the paving.”⁸⁵ Although the quantity of domesticated animal resources remained relatively steady throughout this transitional period, the quantity of agricultural products was declining. Pictish agriculture appears to have been failing as their community was shrinking. This is approximately the phase when the predominance of immature whale bones occurs, as does the greatest diversity of species. Significantly, the quantity of seal

the 34 fragments from Pool were identified by skeletal element. Seventeen vertebral elements were noted at Pool, although there was little preference for any particular region of the vertebral column, as an equal number of lumbar and caudal vertebrae were used. Seven epiphyseal discs were used at Pool, of which five were derived from caudal vertebrae. Five ribs were found, seven fragments of mandible, and three remnants of scapulae. Two substantial fragments of a Pilot whale skull are reported from Pool in the later Norse phase. These fragments apparently were used within a wall construction, but were not available for analysis in this study.

⁸³ As many as eleven of the vertebral remains at Pool represent immature cetaceans of varying species, including Sperm, Sei, Minke, Killer and Pilot whales; Risso's and Bottlenose dolphin; and a Harbor porpoise. Seven of these immature identifications came from the Pictish-Norse Interface (of which three were identified as Pictish artifact types), with an additional four from the Pictish period; none of the immature animals came from the Norse period.

⁸⁴ J. M. Bond, “Beyond the Fringe? Recognising change and adaptation in Pictish and Norse Orkney,” in *Life on the Edge: Human Settlement and Marginality*, ed. C. M. Mills and G. Coles, 84 (Oxford: Oxbow Books, 1998).

⁸⁵ Hunter, 1990; Bond, 1998, 84.

bones found on the site also increases, and several large whale bones, possibly derived from a single Sperm whale, all are found in this same period.⁸⁶

With the arrival of the Vikings sometime in the ninth century, the site was reinvigorated. The Vikings constructed a series of rectangular structures to the north of the Pictish settlement, where earlier cellular structures were infilled or leveled and the focus of the site shifted to the new buildings.⁸⁷ Paleoenviromental evidence reveals an abrupt change in soils and intensified manuring and cultivation with the Norse, as old crops like oats were expanded and new crops were added. Among all this activity in the Viking and Norse periods, whale bone waste appears to decrease, and no more immature whale bones or seal bones are found. The island of Sanday became one of the richest in all of Orkney under the Norse.

The whale bone assemblages at Pool during the Pictish phase may demonstrate a pattern of whale use in a period of stress. While the Pictish settlement was in decline, immature whale bones appear in a proportion unseen in other whale bone assemblages in Orkney.⁸⁸ Julie Bond's analysis of faunal remains on the site also noted the low relative use of wild animals:

Like other Orcadian sites...the numbers of wild animals utilised at Pool are very low...The under-utilisation of these wild resources suggests that there was for the most part a comfortable margin of subsistence, rather than the large numbers of animals seen as 'stress indicators' in some of the North Atlantic settlements...Despite the low number of cetacean remains from Pool, cetaceans, or at least their bones, were clearly resources on the site, even if their significance was only as "a useful supplement or fall-back rather than as a major resource."⁸⁹

⁸⁶ A thoracic vertebra chopping block (PL 1660), a large and heavy proximal rib end (PL 1659), and two larger fragmentary bones, one of which was categorized as a perforated vertebra (PL 1116), occur in the Interface and may have been derived from the same Sperm whale.

⁸⁷ Hunter, 1993, 277.

⁸⁸ Seals were also used more in this Interface period than at any other time in the site's history. Such an intensive use of seals, a stress indicator, is uncommon in the Pictish period in Orkney. Whales and seals typically were not a major part of Pool's faunal assemblage.

⁸⁹ Bond, 1998, 86. It must be noted that while Bond refers to the low number of cetacean bone at Pool, the number is considered low relative to other species on the site, but not relative to whale bone assemblages elsewhere. Pool's whale bone assemblage is comparable to or greater than such assemblages on other sites.

The Picts at this site could have preferentially used or even actively sought immature and small whales, alongside seals and other hunted or gathered resources. With the arrival of the Norse and the reinvigoration of agriculture, this pattern disappears. Of course, we cannot forget that the Picts and Norse may have used different butchery strategies. The Norse settlers theoretically could have continued this practice of immature whale exploitation, but the absence of evidence must be taken as significant alongside the Norse agricultural intensification. They did not appear to need the resources that the Picts had resorted to during their settlement's decline.

Interdisciplinary analysis of text and archaeology allows great insight into local patterns of whale use in the medieval North Atlantic. In the Icelandic sagas, teams of men from individual farms worked together to butcher whales. Communal usage of whales is seen archaeologically in the dispersal of whale bone across most sites in Orkney. At Pool, whale bone does not appear in one or two structures alone, but in garbage heaps, houses, work areas and yards across the site. In the sagas, all the butchering occurred on the shore, where cut meat and blubber were piled alongside the whale for transportation to a settlement. Likewise, the laws emphasize that butchery must occur at the shore and away from agricultural land.⁹⁰ Norse sites in Orkney may reveal archaeologically what the laws dictate and the sagas depict. Vertebrae, the bones typically associated with onsite secondary butchery, are proportionally fewer in Norse phases at Pool than in earlier periods. The archaeology of whale use complements the insights into medieval whale uses provided by all the authors surveyed in this study. But only when all this evidence, historical, literary, ethnographic and material, is combined can medieval whale use be understood as more than the random scavenging as it was once depicted.

⁹⁰ *The Earliest Norwegian Laws*, 126.

CHAPTER SIX



FROM KRAKENS TO FISH DRIVERS: MONSTROUS FISHES IN NORTH ATLANTIC HISTORY AND LITERATURE

Whales appear in most medieval literature as one of nature's antipathies, creatures either malevolent themselves or associated with and controlled by evil beings or malignant forces. Some medieval literature transcends this stereotype and presents whales instead as resources, great fish to be caught like any other, yet infinitely more dangerous to do so. Most medieval Europeans had neither reason nor opportunity to know more of whales beyond this typical monstrous whale folklore. We might expect a different appreciation of whales in northernmost Europe, where the waters teemed with all manner of creatures and life revolved around the sea. Medieval contemporaries had the same expectations. Adam of Bremen recognized the heightened reliance upon marine mammals by northern peoples, although he attributed the prominence of whales in northern climes to demonic rather than ecological causes: "All... who live in Norway are thoroughly Christian, except those who are removed beyond the arctic tract along the ocean. These people, it is said, are to this day so superior in the magic arts or incantations that they... draw great sea monsters to shore with a powerful mumbling of words and do much else of which one reads in the Scriptures about magicians."¹

¹ Adam of Bremen *History of the Archbishops of Hamburg-Bremen*, trans. F. J. Tschan (New York: Columbia University Press, 2002), IV. xxxii, 31.

Medieval Norwegians and Icelanders themselves saw those who lived in the Scandinavian Arctic as potentially magical and dangerous, able to divert fish, to harness the powers of nature and to harm those who sought the resources of the northern waters. Many authors noted the association of whales and northern seas and the exceptional abilities of northerners to exploit these great creatures.

The documentary record of Scandinavian whale use begins long before the first saga was written or laws recorded. Some of the earliest depictions of whales in Europe are the Stone Age petroglyphs from Arctic and subarctic Norway and Sweden.² These carvings, found along fjords, rivers and especially along the shoreline of Trondheimsfjord, date from the Scandinavian Stone Age, ca. 3400 to 1500 BC, into the Bronze Age.³ Alongside stylized depictions of humans, boats, birds, fish and elk are numerous depictions of whales.⁴ The function or meaning of the carvings is debatable, though they have been interpreted as hunting ritual and clan symbols representing land, sea and air.⁵ The symbols show a familiarity with whales on the part of Stone and Early Bronze Age hunter-gatherers. More importantly, the association of whales with boats and other game may indicate close contact with whales at sea or even a religious component to the hunt, in which the gods' aid is sought in capturing the whales. The period when prehistoric Europeans made the shift from primary hunter-gatherers to agriculturalists is still open to debate, although as the images of Arctic and subarctic Norway and Sweden attest, whales were essential within the earliest northern economies.⁶

² K. Søgne, "Rock Art at the Arctic Circle: Arctic and Agrarian Rock Engravings from Tjøtta and Vevelstad, Nordland, Norway," *Acta Archaeologica* 59 (1989) 33; K. Søgne, "On Shoreline Dating of Rock Art," *Acta Archaeologica* 74 (2003): 189–209.

³ Søgne, 1989, 2003. Sites include Bjørset, Søbstad, Røsand, Reppen, Lånke, and Evenhus, among others.

⁴ K. Søgne, "Ritual Landscapes. Toward a Reinterpretation of Stone Age Rock Art in Trøndelag, Norway," *Norwegian Archaeology Review* 1 (1994): 35.

⁵ Søgne, 1994, 46. The locations of these carvings may have been chosen less for human viewers than for the divine: "for some reason unknown to us [the site] was considered a special potent place—a hierophany—the making of rock art enhancing its special qualities or potency" (Meighan cited in Søgne, 2003, 206). The point must be made, then, that whales were among the chosen images to be associated with these sites. Other connections between whales and the fantastic or supernatural will be discussed at greater length in this chapter.

⁶ When did Europeans cease to rely on the sea and wild resources, the so-called 'wet and wild' as their primary means of subsistence, and shift to the 'dry and tame,' or domesticates and agrarian products? New archaeological techniques of palaeodietary analysis, specifically stable isotope analysis of human bone allows a fresh approach

The whale-thronged sea was an inescapable and omnipresent reality in the lives of the medieval Norse communities of Iceland, Shetland, Orkney and the Faroes. While some Norse communities seem to have used whales more than others, all North Atlantic settlers recognized the importance of maritime products in the course of travel, exploration and settlement. The use and consumption of whales was not based on simple ecological determinism. Whale use was as much a cultural choice as an ecological necessity.⁷ Modern North Atlantic nations, especially Norwegians, Icelanders, and the Faroese historically developed a reliance on whales, while their more southern Scandinavian neighbors, including the Danes, Swedes, Orcadians and Shetlanders, historically eschewed the consumption of whales, using them more often as fuel resources.⁸ Medieval tastes may have been less discriminating, by necessity, than their modern descendants.

Medieval Scandinavians exploited whales economically, while simultaneously perpetuating the common myths of monstrous whales as found throughout medieval Europe. The monstrous whale was as much a preoccupation for medieval Scandinavians as it was for other medieval Europeans. Icelanders and Norwegians produced versions of the *Physiologus* and bestiaries by the thirteenth century, depicting whales among other creatures as spiritual and physical threats to mankind. At first glance, local traditions, as seen in the *King's Mirror*, the Legendary sagas of Iceland, and the *Historia* of Olaus Magnus, all the products of

to this old question. Organic remains, of animals and humans, are now tested for varying amounts of different types of carbon and nitrogen found in terrestrial and maritime resources. By analyzing the ratios of ¹³C and ¹²C, ¹⁵N and ¹⁴N in bone, we can determine the relative proportion of maritime resources used by historical populations. This technique, though, remains controversial and subject to variable interpretation. Ultimately we must remember that while primary dependence upon a resource such as whales may decline, whales remain a necessary resource for northerners, even during the height of medieval agricultural production. R. J. Schulting and M. P. Richards, "Finding the coastal Mesolithic in southwest Britain: AMS dates and stable isotope results on human remains from Caldey Island, south Wales," *Antiquity* 76 (2002a): 1011–1025; R. Schulting and M. Richards, "The Wet and the Wild and the Domesticated: The Mesolithic-Neolithic Transition on the West Coast of Scotland," *European Journal of Archaeology* 5, no. 2 (2002): 147–189; K. Lidén, et al., "The wet and the wild followed by the dry and the tame"—or did they occur at the same time? Diet in Mesolithic—Neolithic southern Sweden," *Antiquity* 78 (2004): 23–33.

⁷ See discussion of choices in marine exploitation in chapter three. See also James H. Barrett and Michael P. Richards, "Identity, gender, religion and economy: new isotope and radiocarbon evidence for marine resource intensification in early historic Orkney, Scotland, UK," *European Journal of Archaeology* 7, no. 3 (2004): 249–271.

⁸ Historical exceptions were known during times of hardship, famine or war.

Scandinavian authors, seem to document a typical European perspective of the sea and its quarry. Despite their forays into legendary material, these sources do not simply repeat the common pan-European whaling myths. While monstrous whales do swim the pages of these texts, these are not the same monstrous whales of all medieval tradition. Scandinavians had a much broader conception of the monstrous when it came to marine mammals. The range and complexity of the maritime fantastic seen in the literature of the medieval North Atlantic world surpassed any contemporary traditions of medieval Western Europe. The monstrous whale of Scandinavia, while mimicking monstrous whale behaviors and qualities of the continental whales, was more complex, rooted in pagan myth rather than classical spolia or moral platitudes. At the same time, these more complex monstrous whales also served the same purpose in the north that they did across continental Europe, as metaphorical reminders of Christian morals and behaviors.

The texts surveyed in this chapter are diverse, serving as an introduction to the innovations in whaling literature and history as recorded by medieval North Atlantic authors. The first work surveyed is the *King's Mirror*, a thirteenth century didactic Norwegian narrative on the northern world. Accounts of medieval Arabic travelers in the northern world follow, allowing insight into how external observers perceived of the Norse and northern whale use. Finally, the chapter concludes with the observations of Olaus Magnus, an educated and elite archbishop, and his views on the subsistence patterns, mythologies and whale use of Scandinavia's northernmost peoples. This odd assortment of texts falls into several genres of historical and literary works, spanning the Middle Ages and the early Reformation. Their inclusion in this chapter, though, is not random. They provide unique insight into how medieval northern Europeans saw themselves and their ancestral whale use, as well as the whale use of their even more northern neighbors. These works, which teach, observe, and entertain, reveal perceptions of the natural world that were not found in broader works of general European or Christian interest.

More importantly, these texts share another feature not commonly found in the sagas and laws, the preeminent works of the Old Norse-Icelandic corpus. Within these texts, whales are alive. They feast and frolic, they frighten and pursue sailors, they plot against sinful humans and they serve unholy masters. These texts provide insight into the complex beliefs of medieval Scandinavians of what lurked in the waters that featured so prominently in their daily lives.



The *Kǫng's Mirror* was written in the mid-thirteenth century by an anonymous Norwegian author living in North Trøndelag. This book of instruction, crafted as a dialogue between father and son, was written for young Scandinavian nobility to instruct them on “the four great orders of men in the Norwegian kingdom: the merchants and their interests; the king and his retainers; the church and the clergy; and the peasantry or husbandmen.”⁹ In this respect, it is a work firmly within the mainstream of European tradition. But in the first section of the work, the author turns to the wonders of the natural world of the North Atlantic, including unique animals, geysers, northern lights and mermen. The text provides “...a description of the animal world of the northern seas to which there is no parallel in the earlier literature of the world.”¹⁰

The author's natural descriptions are the most engaging aspect of this work, and the chapters presenting the marvels of Greenland, Iceland, Norway and the Arctic world likely were intended both to edify and to entertain.¹¹ The author of the *Kǫng's Mirror* reports much first-hand information either from travelers or personal experience and he is lauded by historians for providing “clear and detailed...geographical description,...in sharp contrast to many other medieval writings which tended to copy earlier works and reproduce fabulous tales.”¹² This author not only avoids mechanical repetition, but seems disinclined to pass on pure mythology, as seen in the skeptical account of the kraken: “There are...very few who can tell anything definite about it, inasmuch as it is rarely seen by men;...I can say nothing definite as to its length in ells.... Nor have I heard that one has ever been caught or found dead.”¹³ The whales in the *Kǫng's Mirror* are unlike most whales of medieval tradition. Some are monstrous, some are mundane, but none is patently diabolical. Although some of the whales in these fantastic

⁹ *The Kǫng's Mirror (Speculum Regale—Konungs Skuggsjá)*, trans. by L. M. Larson (New York: Twayne Publishers, Inc., and The American-Scandinavian Foundation, 1917), 6. Only the first two divisions of the work survive.

¹⁰ Nansen cited in *The Kǫng's Mirror*, 21.

¹¹ *The Kǫng's Mirror*, 91.

¹² *The Kǫng's Mirror*, 22; A. Ogilvie, “Climatic Changes in Iceland, AD c. 865 to 1598,” *Acta Archaeologica* 61 (1991): 237.

¹³ *The Kǫng's Mirror*, 125.

seas of the *King's Mirror* seem fabulous upon first glance, surprisingly realistic portrayals of whale behavior are recorded.

The most wondrous creations of the northern world were the twenty-one real and fabulous folk categories of whales in the waters surrounding Iceland, creatures to whom chapter twelve of *King's Mirror* is dedicated: "Aside from the whales in the ocean, there are...but few things in the Icelandic waters which are worth mentioning and discussing. The whales vary much both in kind and size."¹⁴ The author reveals that whales are encountered in four ways: viewed at sea, viewed off the coast, spotted by fishermen, and found upon the shore. Some whales are seen rarely if at all. They are the stuff of legend and repute, such as the unspeakable kraken. The author describes each whale according to its size and physical characteristics, behavior, edibility, utility and exploitation status, whether hunted or protected. While the names given to the species described are folk designations such as 'blubber-cutter,' 'fish-driver,' or 'red comb,' or even ancient names, such as grampus used for killer whale, most whales can be identified by modern taxonomies.¹⁵ Right, Blue, Fin, Humpback, Bowhead and Sperm whales, along with various species of dolphins and porpoises, and mythical creatures are surveyed in the text, among others.¹⁶ The author may have had experience viewing whales at sea or upon the

¹⁴ *The King's Mirror*, 22–23.

¹⁵ As with all nomenclature, perplexities abound. The designation of 'blubber-cutter,' for instance, appears to correlate by description with Pilot whales, *Globicephala melas*, but some modern designations for Killer whales, *Orcinus orca*, in Norway and Denmark, *spekkhugger*, translate more closely with the term blubber-cutter. Furthermore, the *King's Mirror* author immediately after this description alludes to 'caaing whales' as a different type of whale; the caaing is the traditional Orcadian and Shetlandic name for Pilot whales, along with 'blackfish.' Lastly, while the blubber-cutter behavior correlates with Pilot whales, its size is specifically stated to be 10–20 ells, while the caaing whale measures only 7. It is possible that the blubber-cutter could be some type of Beaked whale, which also can be driven ashore in large pods.

¹⁶ *The King's Mirror*, 125; many of the same species would be described in the late sixteenth century by Jon Guðmundsson, or Jon the Learned, who wrote the comprehensive survey of folk-cetology of early modern Iceland. Much of Jon's work is based directly upon the descriptions of the *Konungs Skuggsjá*. His work is further distinguished, though, by a series of unparalleled illustrations of the species, many of which are readily identified with modern taxonomic categories of whales. No English translation exists of Jón's natural history of Iceland, but a critical edition of the original text is available in H. Hermannsson, *Jón Guðmundsson and his Natural History of Iceland* (Ithaca, NY: Cornell University Press, 1924).

shore, and likely spent time in Arctic Norway, where species unknown by more southerly authors may have been sighted.¹⁷

Not all of the species named in the *King's Mirror* have been identified with modern taxonomic categories or species of whales due to ambiguity in the descriptions or measurements.¹⁸ The *reyður*, or rorqual, is one folk-species of whale which could be any number of great baleen whales, such as Blue, Fin or Sei whales.

...There is a kind of whale called the rorqual, and this fish is the best of all for food. It is of a peaceful disposition and does not bother ships, though it may swim very close to them. This fish is of great size and length; it is reported that the largest thus far caught have measured thirteen times ten ells,...Because of its quiet and peaceful behavior it often falls a prey to whale fishers. It is better for eating and smells better than any of the other fishes that we have talked about, though it is said to be very fat; it has no teeth. It has been asserted, too, that [the Sperm of this whale]...will be found to be a most effective remedy for eye troubles, leprosy, ague, headache, and for every other ill that afflicts mankind....¹⁹

The rorqual possessed the greatest attributes that whales could have, namely edibility and passive behavior towards humans. The rorqual not only lacked aggression, it swam close to ships, making it an even easier prey. This whale was safe to hunt given its disposition, it was marketable for its medicinal resources, and it didn't share the bad odor which was apparently common to whales. It is the archetype of the desirable whale and is almost exclusively depicted as the whale of choice in a majority of the sagas.

The *King's Mirror* also discusses several smaller species of cetaceans, which typically receive little attention in medieval texts. The impression given by most texts is that large whales were a primary focus of legal, literary and economic concern. The smaller blubber-cutter, though, merits significant attention because it was so valuable for subsistence hunters:

¹⁷ Larson believed that "geographical allusions" within the text made it clear that "the work was written in Norway and in some part of the country that would be counted far to the north." *The King's Mirror*, 59.

¹⁸ The Norse ell, the unit of measurement used in the *King's Mirror* is approximately 18–19 inches, but the ell varied across Scandinavia. Also, it isn't clear where whales were measured, perhaps from head to tail or from head to anus or genital slit, as in the modern Faroes. The earlier footnote regarding nomenclature provides a key example of such ambiguities.

¹⁹ *The King's Mirror*, 124.

Those that are called blubber-cutters—and they are the most numerous—grow to a length of twenty ells; a great many of them are, however, so small that they measure only ten ells; . . . These fishes have neither teeth nor whalebone, nor are they dangerous either to ships or men, but are rather disposed to avoid fishermen. . . . they are constantly being caught and driven to land by the hundreds, and where many are caught, they provide much food for men.²⁰

At ten to twenty ells, blubber-cutters are perhaps better considered as medium-sized cetaceans, but in behavior, number and description, they appear to be a species of large dolphin. Size mattered in Scandinavian whale use and these small whales were choice quarry. According to the Norwegian *Gulathing* lawcode, whales under fifteen feet in length could be claimed by any freeman, while larger whales were subject to more complex laws of division. To legislate the division of small whales would be useless. When stranded on the beach or hunted at sea, these small animals could be carried away or hidden without a trace. Small whale finds might never be reported or even noted, but hiding or hoarding a large whale was virtually impossible as news spread of its stranding and other claimants sought portions. Other small or medium-sized cetaceans also merit attention in the *King's Mirror*: “There are also other varieties of small whales, such as the porpoise, which is never longer than five ells, and the caaing whale, which has a length of seven ells only.”²¹ The caaing whale may refer to another species of large dolphin or perhaps the Pilot whale, one of the most frequently hunted whales among preindustrial communities of the North Atlantic.²²

One of the most dramatic descriptions offered in chapter twelve is that of the grampus, the Killer whale. The author reports that this whale grows to twelve ells, larger than a caaing whale but smaller than some blubber-cutters. But for the grampus, size doesn't matter. It was distinguished by its worrisome behavior, described in fascinating detail. “[The] grampus . . . grow no longer than twelve ells and have teeth in proportion to their size very much as dogs have. They are also ravenous

²⁰ *The King's Mirror*, 124.

²¹ *The King's Mirror*, 126.

²² ‘Caaing’ is a form of the Shetland word *caa*, derived from Norn, an ancient variant of Norwegian combined with lowland Scots and English that was used throughout the Northern Isles. J. Graham, *The Shetland Dictionary* (Stornoway: Thule Press, 1979), 10. The term ‘caaing’ refers to the driving of sheep into a fold, “. . . just as whales are driven into a bay.” A. Jackson, *The Faroes: The Faraway Islands* (London: Robert Hale, Ltd., 1991), 58.

for other whales, just as dogs are for other beasts. They gather in flocks and attack large whales, and, when a large one is caught alone, they worry and bite it till it succumbs.”²³ What makes the *King’s Mirror* report on grampus notable is its resonance both with classical descriptions and modern research into Killer whale behavior.²⁴ In the past decade, biologists have recognized that there are three different types of Killer whales within the single species. Resident, transient and offshore Killer whales vary in “seasonal distribution, predictability of travel routes, pod size, stability and structure, acoustic behavior, respiration behavior, and feeding behavior.”²⁵ Transients also vary genetically from resident and offshore populations and are thought by some biologists to have speciated or diverged into a new sub-species of Killer whales.²⁶ Resident and offshore groups behave and socialize similarly, swimming in large pods of fifty or more animals as they hunt their typical prey of salmon. Transients, though, travel in much smaller packs and some biologists deny that they even have the complicated social structure of pods. They hunt in groups of seven or eight and they hunt violently, throwing their prey, surrounding whale calves or slower individuals, singling them out from a pod. The distinguishing feature between these groups seems to be that residents and offshores eat fish, while transients eat whales.²⁷ These grampus described in the *King’s Mirror* hunt in small packs, they single out individuals and they are relentless. Like earlier accounts by Roman authors, the *King’s Mirror* seems to accurately record the behavior of transients rather than other types of *Orcinus orca*. Even though the

²³ *The King’s Mirror*, 120.

²⁴ Killer whales, *Orcinus orca*, are among the most studied cetaceans today. Their population is typically considered to be numerically healthy and they are sighted frequently in coastal waters of all oceans.

²⁵ A. R. Hoelzel, M. Dalhlein, and S. J. Stern, “Low Genetic Variation Among Killer Whales (*Orcinus orca*) in the Eastern North Pacific and Genetic Differentiation Between Foraging Specialists,” *Journal of Heredity* 89 (1998): 121.

²⁶ R. Baird and H. Whitehead, “Social Organization of mammal-eating killer whales: group stability and dispersal patterns,” *Canadian Journal of Zoology* 78 (2000): 2096–2105. According to one genetic analysis of the transient and resident populations, the two groups have not interbred in 10,000 years.

²⁷ The variety of known transient prey grows annually as more observations of transient behavior are made; they consume Hammerhead, Thresher, Mako and Great White sharks, Gray whales and Minke whales, among others, as well as Spotted dolphins, Steller sea lions, seals, even swimming moose and polar bears.

grampus was not accused in *Kīng's Mirror* of targeting humans or ships, it was not a whale that one hoped to encounter at sea.²⁸

Unlike the terrible grampus, several whales are described as eminently useful, either as good to eat or at least edible, including the Sperm whale, Greenland whale, Raven whale, the White whale (Beluga), and the larger Shield whale, Spear whale and Baleen whales.²⁹ Of these species, several were benevolent, even described as gentle towards humans, and were considered both good to eat and good to hunt. The Humpback, Right whale and Fish driver are also described as good for food, yet these whales were not eaten for other reasons. The Humpback was a dangerous whale that was avoided. Described as seventy to eighty ells long, this great whale is “large and very dangerous to ships,” and made a sport of wrecking ships: “It has a habit of striking at the vessel with its fin, and of lying and floating just in front of the prow where sailors travel. Though the ship turn aside, the whale will continue to keep in front, so there is no choice but to sail upon it; but if a ship does sail upon it, the whale will throw the vessel and destroy all on board.”³⁰ The Right whale, perhaps truly a Bowhead, was also described as good to eat, but like the Humpback it was a malicious whale: “Sea-faring men fear it very much, for it is by nature disposed to sport with ships.”³¹ Good to eat was not always good to catch. These whales must have been used when found stranded or wounded and dying, as they are unlikely species to have been hunted.

The Fish driver, though, was gentle and easily could have been caught, but it wasn't owing to its protected status. The Fish driver, identified as the modern species Fin whale, was protected, “for it drives the herring and all other kinds of fish in toward the land from the ocean outside, as if appointed and sent by the Lord for this purpose.”³² Those who harmed or killed taboo whales like the Fish driver were punished because these heaven-sent whales were not hunted due to their “great and constant service to men.”³³ The Norwegian *Gulathing* law, written

²⁸ Only one documented attack of a Killer whale on a human is known, and that non-fatal episode was thought to be a curious ‘taste’ rather than an attack.

²⁹ The modern analogue of the Raven whale is unclear, but possibly a large dolphin species, colloquially known as ‘blackfish.’ These folk species are varieties of *Odontocete* and *Mysticete*, modern species unknown.

³⁰ *The Kīng's Mirror*, 123.

³¹ *The Kīng's Mirror*, 121.

³² *The Kīng's Mirror*, 121.

³³ *The Kīng's Mirror*, 121.

two centuries before the *Kǫng's Mirror*, also protected these whales: "If a man shoots at a whale in a herring shoal and thus drives away the gift of God, he shall owe a fine of forty marks."³⁴ This self-imposed moratorium on useful whales, a mindful conservation, shows not only that clear distinctions were made between species of whales, but also that there was an ecological awareness of the linked behaviors of many maritime species.

The Fish driver is notable for more than its ability to bring fish to shore. It also maintained order in the fiercely competitive fishing grounds. The Fish driver demanded civility in its presence, and provided herring shoals to fishermen only "as long as the fishermen keep the peace on the fishing grounds... But when fishermen fall to quarreling and fighting, so that blood is spilt, this whale seems able to perceive it; for it moves in between the land and the fish and chases the shoals back into the ocean, just as it earlier had driven them in toward the men."³⁵ In a unique reversal of the whale's typically demonic attributes, here the whale was a moral compass, serving the will of the Lord, providing fish to men or taking them away when untoward behavior occurred.

The antithesis to the benevolent Fish driver is a group of truly bad whales, the *illhveli*. 'Bad whales' were to be avoided, both in encounters at sea and as food. Five whales were declared to be inedible by the *Kǫng's Mirror*, four of which were otherwise described as 'bad.' It isn't clear whether these whales were thought evil because they were inedible or were inedible because they were perceived as evil. Some whales, such as the Beaked whale and the Hog whale, are described as inedible due to their fattiness: "These are not fit to be eaten, for the fat that is drawn from them cannot be digested either by man or by any beast that may partake of it. For it runs through them and even through wood..."³⁶ Some whales were simply not good to eat. The narwhal was "not savage at all," given to avoidance of fishermen rather than attack, yet consumption of its flesh was ill-advised "for fear of disease, for men fall ill and die if they eat of it."³⁷ Trial and unpleasant error would have informed the Norse of which whales were good to consume and which were foul.

³⁴ *The Earliest Norwegian Laws; Being the Gulathing law and the Frostathing law*, trans. L. M. Larson (New York: Columbia University Press, 1935), 126.

³⁵ *The Kǫng's Mirror*, 121.

³⁶ *The Kǫng's Mirror*, 120.

³⁷ *The Kǫng's Mirror*, 122.

Aside from inedibility, other whales should not be consumed because of their nature. Whales like "...the 'horse whale' and...the 'red comb'...are unfit for human food; being the natural enemies of mankind, they are, in fact, loathsome."³⁸ *Eirík's saga* recounts what happened when the good Christians of Vinland consumed meat from one such 'bad' whale, which was prayed for by the pagan hunter Thorhall and delivered by the will of Thor himself:

A little later a whale was washed up and they rushed to cut it up. No one recognized what kind of a whale it was, not even Karlsefni, who was an expert on whales. The cooks boiled the meat, but when it was eaten it made them all ill. Then Thorhall the Hunter walked over and said, "Has not Redbeard [Thor] turned out to be more successful than your Christ?"... When the others realized this they refused to use the whalemeat and threw it over a cliff, and committed themselves to God's mercy.³⁹

The whale was not merely distasteful or objectionable. It made the settlers physically ill because it was a product of pagan worship. In all likelihood, decaying rotten whales washed ashore and were used in all states of decay. Mythology likely developed around those which were indigestible, making these whales antipathies to humanity and thus monstrous whales.

We cannot know whether the *illhveli* or certain species of whales were truly avoided for cultural reasons or whether this mythology was dismissed as simply that. Likewise, it is difficult to know whether the Norse actually believed in the existence of the most monstrous whales which they never saw, or whether they knew they were merely chimeras, like the kraken: "There are...but very few who can tell anything definite about it, inasmuch as it is rarely seen by men; for it almost never approaches the shore or appears where fishermen can see it, and I doubt that this sort of fish is very plentiful in the sea."⁴⁰ Even if these

³⁸ *The King's Mirror*, 122; Among the Khoi of Southern Africa similar proscriptions barred the consumption of several species of whales. "Certain whales were considered unfit for human consumption as they were indigestible and caused diarrhoea. Two whales fell into this category: the Killer whale and the Great Sperm whale." A. Smith and J. Kinahan, 'The Invisible Whale,' *World Archaeology* 16 (June, 1984), 94–95. The *Grágás* laws also consider these same whales to be inedible; *Laws of Early Iceland: Grágás: The Codex Regius of Grágás with Material from Other Manuscripts. Vol. I*, trans. by Andrew Dennis, Peter Foote and Richard Perkins (Winnipeg, Canada: University of Manitoba Press, 1980), K17; p. 50.

³⁹ *Vinland Sagas: Grœlendinga Saga and Eirík's Saga*, ed. and trans. by Magnus Magnusson and Hermann Pálsson (New York: Penguin Books, 1965), 96.

⁴⁰ *The King's Mirror*, 125.

whales or monsters were rarely seen, they hardly faded from popular imagination. Folklore and witness reports kept the kraken and its beastly kin current in Shetland's culture into the twentieth century:

According to tradition, the sea-serpent was occasionally seen, especially off the coast of Norway. It had its home at the bottom of the sea, and it rarely came to the surface. . . . There was just one sea-serpent, according to some; while others believed that there were several that bred under the ocean. . . . Large ones were from one to two hundred feet long. When traveling on the surface of the sea, the sea-serpent's body stuck out of the water here and there, and its head reared thirty or forty feet above the surface. It had a serpent-like head, large eyes, and a long mane similar to masses of seaweed. . . . Once a large serpent was cast ashore dead somewhere (in North Shetland), and its body for months blocked the mouth of a gjo—a short narrow inlet of the sea surrounded by steep banks and cliffs. Some of its bones could be seen in the water there for many years.⁴¹

The kraken according to the *King's Mirror*, as in modern Shetlandic folklore, was the most exotic and most fearsome creature of the seas, and it seems to be a conflation of several mythological traditions. It bears in its physical form some resemblance to the world serpent, the Midgardsormur of Old Norse mythology but in its behavior, it is reminiscent of the *Physiologus* whale. Like aspidechelone, the kraken “when men have seen it. . . . appeared more like an island than a fish,” owing to its great and inestimable size.⁴² Its means of feeding is like that of aspidechelone as well, although the canny author of *King's Mirror* provides detail of a more scientific flavor in his explanation of how the kraken attracts prey:

[When] these fishes want something to eat, they are in the habit of giving forth a violent belch, which brings up so much food that all sorts of fish in the neighborhood, both large and small, will rush up in the hope of getting nourishment and good fare. Meanwhile, the monster keeps its mouth open, and inasmuch as its opening is about as wide as a sound or fjord, the fishes cannot help crowding in in great numbers.⁴³

The kraken draws helpless fish to their fate, not by some seductive odor like the *Physiologus* and bestiary whales, but by vomited chum. This is a

⁴¹ J. A. Teit, “Water-Beings in Shetlandic Folk-Lore, as Remembered by Shetlanders in British Columbia,” *Journal of American Folklore* 31 (1918): 197–198.

⁴² *The King's Mirror*, 125.

⁴³ *The King's Mirror*, 125.

creature that is somewhat less magical than it is practical. Notably, the kraken, unlike aspidechelone, did not draw hapless sailors onto its back as the other monstrous whales did, nor did it cruise the seas to waylay the Christian wayward. It was a creature with strange behaviors that evoked skepticism rather than pious introspection. The description of the kraken reveals a unique aspect of the *Kīng's Mirror* survey of whales of the northern seas. The author diverges from many contemporary European texts by not using these whale tales for moral edification. The descriptions are resoundingly secular, with the sole exception of the heaven-sent Fish driver. Classic Christian interpretations of the kraken's behavior are eschewed and whales are not cast as diabolical servants, ready to oppose Christian travelers. This account leans towards natural history rather than moral allegory.

There is little question that many whales were feared and if an unknown whale was encountered by fishermen, it could easily be construed as a malicious creature. As the *Kīng's Mirror* readily shows, though, Norwegian fishermen and authors were familiar with many species of whales and they did not rely on ancient texts for their knowledge. The text also reveals an apparent eagerness to pursue whales. The anonymous author concludes the survey of whales in a curious way: "And now I have enumerated nearly all the varieties of whales that are hunted by men."⁴⁴ With the exception of the clearly monstrous and fictitious kraken, the author implies that the preceding species were hunted, pursued or otherwise exploited in the Icelandic seas. This statement is tantalizing, for it intimates that all whales are still subject to exploitation, even if they sport with boats, hunt out men or behave in a generally malicious manner. While the blubber-cutters are the only species for which the author describes active hunting—"they are constantly being caught and driven to land by the hundreds"—many other species are clearly fixed in the hunters' gaze.⁴⁵ The *Kīng's Mirror* is unparalleled in its detailed and, for its time, realistic description of the whales of northern seas, yet it fails to inform us of hunting methods to which the author refers. Many different whales are described as the prey for hunters, but given the variety of whales in size and behavior, no single hunting method could be used to obtain them all. Some indication of

⁴⁴ *The Kīng's Mirror*, 124.

⁴⁵ *The Kīng's Mirror*, 119.

how whales could have been obtained comes from an outside source, from visitors to the Norse North Atlantic.



Several Islamic authors, including al-Sharīf al-Idrīsī and al-ʿUdhri, described the traditions and environment of the north to their curious Muslim and Arabic audiences. This was no simple travelogue or tourist account, but rather important intelligence gathering. By the mid-ninth century, the presence of the ‘Northmen,’ a generic term for the Norwegian, Swedish and Danish raiders of the continent, was felt across Europe. In 844, though, the Norse came upon a more formidable foe, when an army of Norsemen raided Muslim Cadiz and Seville. Although they were defeated by Umayyad armies, the northerners left an impression. Umayyad rulers soon thereafter sent an envoy to the ‘King of the Norsemen,’ somewhere in the British Isles or Ireland, where the embassy found many Norsemen both on the “great island in the Encircling Ocean, [and on]... many other islands, large and small.”⁴⁶ Thus began the documented travels and exploration of Muslims in the North Atlantic, waters they called “the Sea of Darkness, the Green Sea, the Encircling Sea...”⁴⁷ These Islamic travelers of the North Atlantic, like so many others, noted the marvels and menace of these waters: “I sailed in the sea in the year 288/900, I mean the Western Sea, and we came to a place called al-Bartūn. With us was a lad from Sicily, who cast a fish-hook into the sea, and brought out a fish, the size of a span. We looked, and saw behind one ear in writing ‘There is no god but God’, on its head ‘Muhammad’, and behind the other ear ‘the Apostle of God’.”⁴⁸ The Sea of Darkness and the men who mastered it held great mysteries and spectacles for visiting Muslims.

The Northmen and their ways were also a subject of fascination for these travelers. The whaling strategy of eleventh-century Hiberno-Norsemen was recorded by the Spanish geographer al-ʿUdhri (ca. 1058), quoted in a later work by al-Qazwīnī (ca. 1283). While the Muslims of Spain must have known whaling from their travels through the Bay

⁴⁶ al-Ghazāl, cited in D. M. Dunlop, “The British Isles according to Medieval Arabic Authors,” *Islamic Quarterly* 4 (1957): 13.

⁴⁷ Al-Masʿūdī, *Murūj adh-Dhahab*, cited in Dunlop, 1957, 18.

⁴⁸ al-Jumānī in al-Qazwīnī, cited in Dunlop, 1957, 18.

of Biscay, where early Basque whalers operated by the ninth century, al-ʿUdhri’s account reveals no familiarity with the style of hunting practiced by the Hiberno-Norse.

He [al-ʿUdhri] related that on their coasts they [the Norsemen] hunt the young of the whale, which is an exceeding great fish. They hunt its calves, regarding them as a delicacy. They have mentioned that these calves are born in the month of September, and are hunted in the four months October to January. After this their flesh is hard and no longer good for eating. As to the manner of hunting them, al-ʿUdhri mentioned that the hunters assemble in ships, having with them a great iron blade with sharp spikes. In the blade is a great strong ring and in the ring a strong cable. When they find a calf, they clap their hands and shout. The calf is delighted by the clapping and approaches the ships, wanting to be friendly with them. A sailor specially appointed for the task rubs the calf’s forehead briskly, and the calf finds pleasure therein. Then he places the blade in the middle of its head and, taking a powerful iron mallet, he strikes with it upon the blade with all his force three times. It does not feel the first blow, but at the second and third it struggles violently. Sometimes it hits part of the ships with its tail and destroys them. It does not cease struggling till weariness overtakes it. Then the crews of the ships take turns to drag it, till it is brought to the shore. Sometimes the mother of the whale-calf sees the struggle and follows them. They prepare much powdered garlic, which they scatter on the water. When the whale smells the garlic, she lets (the calf) go, and turns backwards in her tracks. Then they cut up the meat of the calf and salt it. Its meat is white like snow, and its skin black as ink.⁴⁹

Although it has been described as “some whale-boat-man’s humorous version of how to catch a whale,” al-ʿUdhri’s description of Hiberno-Norse whaling has in recent years been seen in a rather different light.⁵⁰ This short and seemingly fanciful account is dense with detail, as it depicts elements of whaling strategies common throughout the northern world.

The strategy of the hunt is simple, involving a cadre of small boats as used in drive-whaling. The boats must be small so that the whale can be accessed, for it is not struck from afar, but rather delicately. The weapon of choice is a spiked iron blade with attached ring and cable, a weapon that sounds something like the barbed harpoon used by the Flemish whalers observed by Albertus Magnus in the thirteenth century,

⁴⁹ Dunlop, 1957, 20.

⁵⁰ Dunlop, 1957, 20.

or the barbed spears found in Iron Age Norwegian graves.⁵¹ A similar weapon was described in a late seventeenth-century text on whaling in medieval Iceland and Norway: “When they rowed out fishing or searching for the whale, then they always had some shot along with them as spears with sharp irons, so they could not be pulled out again, like the barbed spears which the fishermen still use.”⁵² By all accounts, though, this tool is essentially a harpoon with a barbed spear and an attached cable. While similar equipment can be found in other sources, the method of pounding the harpoon into the whale’s head is unlike any hunting method described in other whaling accounts and is likely fallacious. However, such a practice may have been used after the whale was killed, in order to secure the tow line attached to the harpoon.

The whale is not pursued or surrounded by the boats, which seem to be used solely for the towing of the young yet sizeable whale. The type of whale hunted determines the strategy, and here, only the young of the whale is hunted. The seasonality of this coastal hunt may indicate that the hunters targeted migrating mothers and calves, rather than resident populations. The behavior of the whale calves in the text may initially seem unusual and perhaps even fabricated, but al-‘Udhri’s characterization of the calves as friendly and curious is confirmed by historical and modern accounts, as whale calves are popular prey among many traditional hunters.⁵³ Young whales were a delicacy, offering succulent flesh that could be immediately consumed or salted and preserved, and they were also easier to obtain. Many species’ calves are known to spy hop, approach boats when excited, and swim closer to the shore than do adults. The clapping and shouting of the whalers is documented in other whaling cultures as both an attraction and deterrent for some species, but curious juveniles are responsive to such noise. The wary mother, though, required as much attention as her calf, if not more. The hunters were prepared with additional deterrents to keep the larger, more dangerous whale literally at bay. Powdered garlic, seemingly fanciful, is one of several substances reputedly poured

⁵¹ O. Lindquist, “Whaling by Peasant Fishermen in Norway, Orkney, Shetland, the Faeroe Islands, Iceland and Norse Greenland: Medieval and Early Modern Whaling Methods and Inshore Legal Régimes,” in *Whaling and History Perspectives on the Evolution of the Industry*, eds. Bjørn L. Basberg, Jan Erik Ringstad, and Einar Wexelsen, 30 (Sandefjord: Kommandor Chr. Christensens, 1995).

⁵² Lindquist, 1995, 29.

⁵³ I. Krupnik, “Prehistoric Eskimo Whaling in the Arctic: Slaughter of Calves or Fortuitous Ecology?” *Arctic Anthropology* 30, no. 1 (1993b) 1–12.

into water to deter or direct whale movement. Later texts, including Marco Polo's travel account, describe whalers scattering garlic, blood, or other substances through the water either to attract or repel whales. One such substance was said to intoxicate whales, making them sluggish and easier to kill. The garlic, in great enough quantities, could be an effective deterrent, irritating the whale's skin or eyes or burning if taken in the blowhole.

The description of the whales' behavior and appearance, with meat "white like snow" and skin "black as ink" is somewhat generic, but it can be used to narrow down the species.⁵⁴ The whale calf itself is described as sizeable, able to strike at boats at only a few months old. Lindquist states that the most likely species hunted by these Hiberno-Norse whalers were like those sought by Ottar, Right whales.⁵⁵ Like the other species discussed here, the coloration of Right whales make them a candidate for the whales of this account, as do their behaviors. Right whales were the frequent prey of early hunters because they were easy whales to approach and tow. They also may have been common residents in the North Atlantic and Irish Sea, as their breeding grounds are thought to be in the Bay of Biscay.⁵⁶ The other species which may have been hunted by the Norse in al-'Udhri's description are Beaked whales, specifically the Northern Bottlenose whale, whose juveniles are black or dark brown. This species is described as curious and gregarious; "...it will approach stationary boats and seems to be attracted by strange noises,... This, combined with its habit of staying with wounded companions, made it especially vulnerable to whalers."⁵⁷ Dismissed by some as fanciful, this text offers details congruent with later whaling methods in the North Atlantic and the hand-harpoon hunting methods of Biscayan Basque whalers.

Another Islamic traveler noted, with equal fascination to al-'Udhri's, the use of whales in the lands of the Sea of Darkness. Al-Sharīf al-Idrīsī, known in medieval Europe as *Geographus Nubiensis* or the Nubian Geographer, seems both enchanted and somewhat horrified by the barbarity of the primitive inhabitants of the 'Inner isles of Britain.' Al-Idrīsī in

⁵⁴ Dunlop, 1957, 20.

⁵⁵ Lindquist, 1995, 34.

⁵⁶ C. C. Kinze, *Marine Mammals of the North Atlantic*, trans. D. A. Christie (Princeton: Princeton University Press, 2001), 123.

⁵⁷ M. Carwadine, *Whales, Dolphins and Porpoises* (New York: DK Publishing, Inc., 1995), 108.

1154 wrote his geographical treatise *Nuzhat al-Mushtāq fī khtirāq al-āfāq*, 'Entertainment for One Desiring to Travel Far,' as titled by the book's patron, King Roger II of Sicily. His work has been called "undoubtedly the best account of Britain afforded by any medieval Arabic author," and "[for] sheer volume and detail of description... unsurpassed as a medieval text both in narrative geography and cartography."⁵⁸ Making use of Ptolemy as well as contemporary oral and narrative sources, al-Idrīsī was an innovative geographer who was not restricted by earlier prototypes or myth. He is credited with introducing a "new type of projection that is still not fully understood and he introduced a new type of map that strongly affected later cosmographers and thinkers like Ibn Khaldun.... [He] produced more regional maps of the world than any other medieval cartographer,... and his description of certain regions remote from Sicily, such as the Balkans or northern Europe, is remarkably precise."⁵⁹ The northern extreme of his map was 64°N, touching upon the Arctic Circle and the northern North Atlantic.

In his account of Britain, which included the expected survey of geography, climate, and towns, typical fare for geographical works, al-Idrīsī includes information on the endlessly fascinating 'Sea of Darkness.' Those who have traveled in the North Sea or North Atlantic in inclement seasons know that al-Idrīsī hits the mark in his description:

[There] come continually from that direction [the Sea of Darkness] mists and rain, and the sky is always overcast, particularly on the coast. The waters of this sea are covered with cloud and dark in colour. The waves are enormous and the sea is deep. Darkness reigns continually, and navigation are difficult. The winds are violent and towards the west its limits are unknown. In this sea are a number of inhabited islands, but few sailors dare to risk their lives therein.⁶⁰

But for all of its ominous qualities, the Sea of Darkness was also productive and fruitful: "In spite of all that is terrifying in this sea and in spite of its cloud-covered waves, it contains many excellent fish, and fishing goes on in various places. There are also sea-animals of such size

⁵⁸ Dunlop, 1957, 20–21; M. Tolmacheva, "al-Idrīsī," in *Medieval Trade, Travel, and Exploration: An Encyclopedia*, eds. J. Block Friedman and K. Mossler Figg, 14 (New York: Garland Publishing, 2000). al-Idrīsī based the account on oral and written sources while he lived in Sicily, using French and Flemish sources for his British study, although he is reputed to have traveled to England and France himself.

⁵⁹ Tolmacheva, 14.

⁶⁰ Al-Idrīsī cited in Dunlop, 1957, 21.

that the inhabitants of the inner isles employ their bones and vertebrae instead of wood for building houses. They also make from them clubs, lances, spears, daggers, seats, ladders, and other things which elsewhere are made of wood.”⁶¹ Here al-Idrīsī attributes the bones not to sea monsters, as later European authors might, but rather to sea animals. While he does not tell his patron how those bones of sea animals were acquired, his description of bone furniture and tools follows immediately upon his discussion of fishing, which ‘goes on in various places.’ The description which he offers reveals the frank eye of an ethnographer reporting on surroundings. While his account correlates well, as discussed in chapter four, with known archaeological and ethnographic applications of whale bones in the North Atlantic world, it also echoes the classical accounts of Strabo and Arrian reporting on Indian Ocean cultures who used whale bones in similar fashions. Is al-Idrīsī simply seeking a contemporary northern corollary for the classical wonders of the eastern world, or does he offer realistic accounts of whale use? The latter seems to hold true, as will be seen the comparable later account of Olaus Magnus.

Whaling, or the whales themselves, left an impression on the Islamic visitors to the north. As early as the late ninth century, we find the loan word ‘*uwāl*’ in the text of al-Mas’ūdī, derived from a northern language, perhaps the Anglo-Saxon *hwal* or Old Norse *hvalur*.⁶² These two Islamic accounts provide some of the most straightforward observations on whale use of any contemporary medieval sources. This chapter concludes with the work of Olaus Magnus, whose account of whale use in the medieval Arctic north is at times as full of curious wonder as the accounts of those most foreign Islamic visitors to the great dark seas.



Olaus Magnus (1490–1557) is by several centuries the latest author to be examined in this study. His work is included, though, because his *Carta Marina* of 1539 and *Historia de gentibus septentrionalibus*, or *History of the Northern Peoples*, of 1555 are awash in northern traditions of whale

⁶¹ Dunlop, 1957, 22.

⁶² D. M. Dunlop, *Arab Civilization to AD 1500* (London: Longman Group Ltd., 1971), 103.

use which likely predate Olaus' account by centuries. From 1518 to his death in 1557, Olaus Magnus worked in some capacity towards serving and strengthening the Catholic Church. In 1518, he served under a papal legate in northern Norway, where he was first exposed to the environment and traditions of the northernmost Scandinavian cultures. Thereafter, he became a powerful priest in Stockholm's greatest church by 1520, and archbishop of Uppsala, in absentia, by 1544. Olaus and his brother Johannes were exiled from Sweden following the conversion to Lutheranism of King Gustaf Vasa in 1527. During their exile, both brothers engaged in scholarly endeavors, Johannes writing an ancient history of northern peoples and Olaus focusing on contemporary cultures.

Olaus' first great work was the *Carta Marina*, begun in Gdansk in 1527 and completed in 1539. This massive map, produced in nine great plates, was accompanied by a short Latin text. He also produced two explanatory pamphlets in German and Italian, written for the benefit of the Church and Crown, to reveal all the lands lost to the faith with the Protestant Reformation. Olaus vowed to complete a full accompanying text for his map, in order to provide an encyclopedic work on his beloved north for the nobility of Central and Northern Europe. Much of the work on *Historia* or 'Inquiry' was completed while Olaus served at the Council of Trent. Swedish Catholicism was not saved at Trent, but Olaus' *Historia* lasted as a popular work over the following centuries.

An illustrated accompaniment to the *Carta Marina*, each of the *Historia*'s 22 books and 124 chapters begins with a woodcut reminiscent of or derived from the *Carta*. While the pictures were edifying in themselves, Olaus did not rely solely on images, personal experience or contemporary accounts for his study. He made use of the greatest authorities of the ancient and medieval worlds, many of whom likely never saw the north. His description of various phenomena, animal, vegetable and mineral, as well as mirabilia, required expert authority, including Pliny, Procopius, Albertus Magnus, Ambrose, Strabo, Orosius, Avicenna and Jerome among others. Olaus' description of fantastic and common whales borrows heavily from Albertus Magnus' *De Natura Rerum*, but he also incorporates much original information. His observations on the early fishing industry of Norway provide new insight into the traditional maritime economy of the northern world. Some authors attribute his originality, particularly his maritime observations, to time he spent at sea and in discussion with mariners. Of late scholars have

noted his precision in the *Carta*: “It seems likely that Olaus Magnus got the information from mariners of the Hanseatic League operating out of northern German cities, many of which he is known to have visited and lived in...”⁶³ His depiction of the Iceland-Faroes Front, a broad surface turbulence of eddies found east of Iceland, where the warm Gulf Stream meets cold Arctic waters, is hailed as remarkably precise and indicative of accurate sources, either personal observation or secondary report.

In a work described as otherwise sober and factual, book twenty-one stands out as an awestruck celebration of the bizarre, frightful, and eminently useful whales and monsters of the northern seas. Entitled ‘Monstrous Fishes,’ this book is devoted to whales and sea monsters and how those creatures were used by the northern Norwegians. Regardless of the interesting uses which people made of whales, it was the diversity of the northern ocean that seemingly held Olaus most in wonder:

Within its swirling waters the vast Ocean presents a wonderful spectacle to every nation. It brings forth to view its various offspring, striking us not in their hugeness and similarity to the constellations, so much as with their menacing shapes, so that there appears to be nothing hidden in the heavens, on earth, in earth’s bowels or even among our household stores, which is not preserved in its depths. Inside this broad expanse of fluid Ocean, which admits the seeds of life with fertile growth, as sublime Nature ceaselessly gives birth, a conglomeration of monsters may be found.⁶⁴

Whereas St. Ambrose’s *Hexameron*, one of Olaus’ major sources for his study of the seas, seems to rejoice in the wonder of the innumerable creations within God’s waters, Olaus tends more towards terror than wonder. As seen in *Carta Marina*, fantastic scaly whales slither through the North Atlantic, wreaking havoc with ships, leaving chaos in their wake. They swim alongside various flotsam and jetsam, including driftwood and loose barrels from ships, much of which the whales generated through their malicious behavior (Fig. 24). The animals occupying these seas often bear legends, including *balena*, *orca*, *cele*, *rosmarus piscis* (wal-

⁶³ H. T. Rossby and P. Miller, “Ocean Eddies in the 1539 Carta Marina by Olaus Magnus,” *Oceanography* 16, no. 4 (2003): 77.

⁶⁴ Olaus Magnus *Historia de Gentibus Septentrionalibus Romae 1555*, ed. Peter Foote, trans. Peter Fisher and Humphrey Higgins (London: The Hakluyt Society, 1996), XXI, preface; 1081.

rus) and *vaca marina* (sea cow).⁶⁵ Men are shown in the claws of giant crustaceans or being slurped down the mouth of sinuous sea serpents. One creature is shown with a half-consumed seal in its mouth. Olaus Magnus has incorporated a huge body of whale lore into the depictions on his map. The monsters and whales shown by Olaus sneer and stare, with leering eyes, bristling foreheads, sharp, upturned fangs and vigorous water-spouts from tall blowholes positioned atop their heads. The map, like the illustrations of the *Historia*, wriggles in its eddies and currents, as small winged fish swim alongside giant crustaceans and sea unicorns. They occupy all corners of the North Atlantic, snaking and sidling by ships, other creatures and even approaching the coast. This teeming sea of monstrous creations was a fascination not only to Olaus, but to those fishing in its waters, for the fishermen likewise were distracted by the ceaseless activity and aggression of the creatures of the deep: "Fishing in the Norwegian Ocean is said to be dangerous for a large number of reasons. . . . Terrible storms spring up, in which the fishermen are rapidly engulfed by the waves; or they are scattered by giant blocks of floating ice; or they are detached from their fellows and forced to sail in different directions when they fight with whales or other sea monsters. . . ." ⁶⁶ The wonders of the sea are largely threatening and all too ready to challenge those men bold enough to ply the waves.

The whales described by Olaus are not unlike other fantastic medieval images of whales and Olaus was clearly indebted to Albert the Great, Thomas of Cantimpré, Vincent of Beauvais and earlier encyclopaeidists and authors in his accounts of these monstrous fishes.⁶⁷ While many descriptions are to some extent typical of sea monsters, they are given life by Olaus in his magnificent illustrations of an outrageous panoply of horrific beasts in the *Carta Marina*. His descriptions of the monsters of the Atlantic deep in the *Historia* are representative of these images of beasts:

⁶⁵ E. Lynam, *The Carta Marina of Olaus Magnus, Venice 1539 and Rome 1572* (Jenkinson: Tall Tree Library, 1949).

⁶⁶ Olaus Magnus, XXI, I; 1082.

⁶⁷ Albert the Great *Man and the Beasts; De Animalibus* (Books 22–26), trans. by James J. Scanlan (Binghamton, NY: Medieval and Renaissance Texts and Studies, 1987), XXIV, xiv–xv. See also John Block Friedman, "Albert the Great's topoi of direct observation and his debt to Thomas of Cantimpré," in *Pre-modern Encyclopaedic Texts*, ed. Peter Binkley, 379–392 (New York: Brill, 1997).

Their savageness is apparent at first glimpse, since they cause spectators to tremble and anyone who gazes longer at them grows terrified and numb. In shape they are dreadful, for they have square heads armed everywhere with sharp spines and surrounded by long horns like the roots of an upturned tree. These heads are fifteen to eighteen feet long, jet black, and set with huge globular eyes.... The pupil...is coloured a flaming red and during the hours of darkness it seems to far-off fishermen like a blazing fire amid the waves. Hanging down like a beard are long, thick hairs resembling goose-feathers. Compared with their enormous square heads the rest of the body is quite small....A single one of these monsters can quite easily capsize or sink several large ships crammed with the strongest sailors.⁶⁸

While some aspects of this description may be explained, such as the huge eyes and the beard, perhaps some misinterpretation of mouth and baleen plates and fringe, other aspects of the account are purely fantastic, even though they may have been derived from sailors or seafarers. Olaus cites “reliable evidence of Norwegian fishers” in his account of mermen:

If you take them prisoner but do not promptly release them, such a violent storm arises, accompanied by a frightful wailing of these man-like creatures and several of the other monsters, that the heavens seem to be crashing down; and the fishermen, even with the utmost exertions, will scarcely manage to save their skins, let alone catch fish. So whenever that sort of thing happens, care is taken through a rule observed by fishermen when any marine monsters have been drawn up like this. Remarking the difference in shape, they at once sever their hooked lines and let the creatures go.⁶⁹

Enormous and impossible whales, up to six hundred feet long, one even four miles long, also are found in the *Historia*. The ‘spouter’ was now three hundred feet long and able to leap out of the sea, still resembling the ‘colossal pillar’ that Strabo first described. It was capable of submerging ships with its spraying and spouting of water and smashing down upon ships with its massive body (Fig. 25). Other fantastic creatures frolic in Olaus’ seas, many of which existed for the pure pleasure of tormenting sailors.

In contrast, some of his descriptions resound with elements of truth. His description of dolphins, friendly to humans and attracted to music, finds concord in modern accounts of dolphin behavior, as well

⁶⁸ Olaus Magnus, XXI, v; 1086–1087

⁶⁹ Olaus Magnus, XXI, preface.

as resonance with other medieval descriptions.⁷⁰ Likewise, his discussion of the grampus, enemy to most other whales, reminds us of the grampus behavior seen in the works of Pliny and *King's Mirror*. "The grampus, a creature resembling an upturned boat, is armed with ferocious teeth, which it uses as brigantines do their prows, and rips at the whale's genitals or the body of its calf. It rushes to and fro, harassing the whale with its spiny back, trying to thrust it into the shallows or on to the shore."⁷¹ Olaus repeats both fact and fiction from a host of his predecessors, although his whales ultimately differ little from the monstrous whales of antiquity.

The predominance of monstrous whales and the paucity of mundane and useful species, as populated the *King's Mirror*, reveals Olaus' status as an outsider to the culture of the Arctic north. Unlike the *King's Mirror* author, who seems to have experienced life in northernmost Scandinavia, Olaus seems more a fascinated visitor to this culture. This Swedish churchman cannot have viewed many whales at sea or shore, although he claims to have personally witnessed a dolphin's response to harp music "out on the open sea."⁷² His accounts on whales are largely traditional and derived. Thus, we see the sea monster Jasconius of Brendan's voyage, and the aspidechelone of *Physiologus* reproduced, and sea monsters of the Mediterranean mingle with his accounts of northern creatures.⁷³ Yet unlike the monstrous whales of common medieval tradition, and like the *King's Mirror*, Olaus is sparing in his moral application of these creatures' behaviors apart from repeating Ambrose' moral exhortations and analogies.⁷⁴ He does his best, however, to relate the more pernicious and offensive sea beasts to the growing threat of Protestant influence in Sweden, as in his account of the monstrous sea-pig. Olaus' work was aimed at a noble, educated and

⁷⁰ Olaus Magnus, XVIII. xxxi; XX. xii; Olaus continues to say that while trumpets attract and amuse dolphins, they drive away whales and are used by fishermen as one form of protection against sea beasts: "Among other aids [sailors] have recourse to blowing a shrill note on a trumpet, and because these monsters can hardly stand the sound of its blare, it is their turn to speed away to the deep troughs of the ocean" (Olaus Magnus, XXI. iii).

⁷¹ Olaus Magnus, XXI. ix.

⁷² Olaus Magnus, XX. xii.

⁷³ The monstrous whale of Ambrose's *Hexameron*, or the *Physiologus*' aspidechelone appears in chapter 25, and Brendan's whale is described in chapter 26. Neither is described in a substantially different manner than found in the original traditions.

⁷⁴ Olaus Magnus, XXI. xxvii.

religious audience, and tended more towards encyclopedic knowledge than exhortatory exposition.

Olaus' greatest contribution to premodern maritime studies is found in his detailed look at the fishing industry of Norway, an account unparalleled by any other texts apart from his model and source, Albertus Magnus. We are told that Norwegian fishermen take to the ocean in January, February and March and they sail for two days into the North Atlantic between Norway and Iceland, "striking out from the coast to the high seas in sturdy vessels" equipped and provisioned for twenty to thirty days at sea.⁷⁵ To judge by the time of year specified by Olaus, the fishermen were likely to have encountered resident populations of *Balaenidae*, *Balenopteridae* and *Delphinidae*.⁷⁶ "Many thousands of fishermen [from] the most distant communities of Norway, namely Andanes, Trondenes, Duvanes, Gamlavik, Nyavik, and other places round Vardøhus..." set out for long periods of time, with the aid of fishing techniques and technologies unavailable to their Viking ancestors.⁷⁷ They did not merely cast lines or set nets. They trawled the seas, drifting "to and fro with the currents till all their boats are chock-full. To guide them and help them regain the shore they have but one preservation, a mariner's compass..."⁷⁸ They set out for great catches to be salted, preserved and brought back to market.

While their methods and means seem unlike those of their earliest Norwegian ancestors, they still maintained their predecessors' traditions and cultural beliefs. They feared the same creatures, the mermen, kraken, and other monsters of the deep. These great monstrous fishes inspired horror by their appearance and could maim, kill or curse the sailor who caught or touched them: "Off the coasts or out in the Norwegian sea are found monster fish with strange names (though they are reckoned to be species of whale). Their savageness is apparent at first glimpse, since they cause spectators to tremble and anyone who gazes longer at them grows terrified and numb."⁷⁹ Whether the sixth or sixteenth century, encountering some whales at sea was never desirable. To exacerbate this portrait of the threatening seas, Olaus does not record the benevolent species of whales found in *King's Mirror*. Virtually

⁷⁵ Olaus Magnus, XXI, i.

⁷⁶ See the appendix for these families and their species.

⁷⁷ Olaus Magnus, XXI, i, 1083.

⁷⁸ Olaus Magnus, XXI, i, 1083.

⁷⁹ Olaus Magnus, XXI, v, 1086.

every creature in his northern oceans existed merely to sport with or to slurp down terrified sailors.⁸⁰

As has been seen in other sources, the Norwegians opportunistically took whales at sea, but Olaus never clearly describes pelagic or even coastal whaling. He mentions great monstrous creatures being caught accidentally in nets or on hooks, but never deliberate efforts to hunt the greatest ‘fishes’ of the seas. It seems that Olaus’ fishermen are predisposed to simply avoid all whales and Olaus thus offers strategies to deter whales rather than to attract them. Shrill trumpets, gunshots and cannon fire by their report alone deter the monstrous whales: “[Bullets] or cannonballs...spend their force through the resistance of the water or the monster’s fat. They can only inflict a mild wound on such a titanic body, protected as it is by a prodigious wall of blubber.”⁸¹ Other strategies include throwing large caskets overboard to distract the whale or the often reported strategy of water pollution, in Olaus’ case, “pouring from every side of the ship a lye made from castor” to deter the whale’s attack (Fig. 24).⁸²

While some whales were avoided at all costs, according to Olaus, other fish were pursued. Olaus’ description of hunting for *xiphias* or swordfish, taken from Pliny, is somewhat similar to al-Udhri’s account of Hiberno-Norse calf-whaling.⁸³ The *xiphias* is surrounded by “numerous two-oared rowing boats,” speared with a barbed harpoon, and then retrieved via an attached line, after the creature has swum madly and exhausted itself. Deliberate hunting is also described for walrus, in gruesome if not fanciful detail. The walrus skin is loosened or cut away at the tail and then tied up or fastened to the shore. The hunters then pelt the walrus with stones so that it literally falls from the shore, skinning itself alive.⁸⁴ Other than these lesser creatures, smaller and less overtly hostile than the whales, Olaus offers only an allusion to deliberate taking of cetaceans: “When sea-monsters or whales have been hauled out of the sea thanks to the fishermen’s skill, resourcefulness and strenuous toil, or driven on to the beaches by violent wind and storm, or by the wrath of hostile fish, the people of the neighbourhood divide

⁸⁰ Numerous monstrous analogues are cited in other works, including a letter of Archbishop Erik Walkendorf to Pope Leo X, and works by Pliny, Vincent of Beauvais, Strabo, Peter Martyr, Orosius, Procopius, and Volaterranus.

⁸¹ Olaus Magnus, XXI, vii, 1089.

⁸² Olaus Magnus, XXI, xxxii.

⁸³ Olaus Magnus, XXI, xiv.

⁸⁴ Olaus Magnus, XXI, xxviii.

the booty with axes and hatchets...⁸⁵ Olaus provides no discussion of how this is accomplished, which whales were prized, or the tools and tackle needed to obtain whales. Although marine mammals, monstrous sea beasts and whales were occasionally caught and drawn up to ships, they were frequently released, according to Olaus, as most of these creatures were harmful either to men or to their catch.

Scavenging of beached cetaceans is described as the preeminent form of whale acquisition. Chapter fifteen best describes the methods used to secure and scavenge stranded whales:

The whale rushes in with astonishing greed to devour herring, and also seals,.. For this reason it frequently runs into danger among sandbanks, which with the rise and fall of the tide become, as it were, stripped bare by the waters and do not allow the trapped monster to make its retreat to the nearby deeps. This causes it to thresh so forcefully with its powerful tail that it leaves a deep trench, and because of obstructing sands on every side it is unable to swim away.... When the fishermen get wind of this, they come thronging fast and tie the animal down by fastening ropes and strong anchors inside its jaws and in the breathing-holes or vents of its head, to prevent it escaping when the tide returns. The combined strength of a large gang of men enables them to drag it up to the shore, or alternatively they bind it in such a way that even its massive energy cannot help it to leap back into the sea.... Certainly during storms some giant beast, either mauled in an attack by one of its enemies, or tired out and robbed of its strength, will be flung up on to the shore by the rough winds, so that folk can seize upon it as their booty. But if there is some suspicion that its powers may revive, they stick daggers or big, sharp spikes beneath its sides while it lies quiet, and from these violent jabs of steel it loses blood until it expires. Sometimes too a monster drops into an unusually heavy sleep on the beach as it basks in the sunshine, and then it falls a simpler prey to the hunters, who secure it with their ropes and anchors.⁸⁶

The whales of Olaus' accounts that were obtained in this manner yielded enormous quantities of meat and oil, following almost verbatim the account of Albertus Magnus. One whale stranded and secured on the beach in northern England was said to yield "almost a hundred sizable wagons" of useful materials.⁸⁷ Other whales that were driven ashore

⁸⁵ Olaus Magnus, XXI, xx.

⁸⁶ Olaus Magnus, XXI, xv. Olaus reports that this is the means by which Byzantines caught and dispatched of Porphyrios, the great sea monster terrorizing their shores, according to Procopius; Olaus Magnus, XXI, xii.

⁸⁷ Olaus Magnus, XXI, xiii.

produced even more: “[The] people of the neighbourhood divide their booty with axes and hatchets in such a way that with the meat, blubber, and bones of a single whale or monster they can fill between 250 and 300 carts.”⁸⁸ Once the whale was divided, its soft tissues and bones were used in an amazing diversity of applications, beyond simple meat and oil. Small bones were used as fuel, whale skin was fashioned into belts, purses, ropes and even window or door coverings, and blubber was used as a lubricant on ropes and ship-timbers, but also for medicinal purposes. But the most magnificent and marvelous account in Olaus Magnus’ report on whale exploitation is his description of the uses of large bones in the construction of houses.

Olaus describes fewer whales than the author of *King’s Mirror* and those which he does describe are less detailed and unique. But this is not due to any oversight on Olaus’ part. Rather, it is a reflection of his true intention within the *Historia*. Environment and ecology play an important role in his work, but his true focus is the people of the north, and their culture, beliefs and ecological adaptations. Thus the whales themselves are less notable than northerners’ uses of whale tissues and bone. Olaus is more comprehensive in discussing how whales actually were used than any author who preceded him. His report on the whale bone houses of northern Norway not only includes details of construction but also provides insight into the cultural beliefs surrounding whale bone houses (Fig. 26).

Olaus explains that the harsh climate of Arctic Norway does not allow sizable trees to grow, so wood is not readily available for building. However, “provident Nature” compensates for this poverty:

... The severe frosts and powerful storms in the extreme parts of the North do not allow any reasonable growth to the trees from which folk could build the homes they need. Consequently, provident Nature has taken thought for the inhabitants and enabled them to construct houses and all the requisite furniture within the gigantic ribs of these animals. ... it is a known fact that the bones which remain are so strong and enormous that people can produce from them entire homes: walls, doors, windows, roofs, chairs, and even tables. The ribs are twenty to thirty feet long, or even more, while the spinal vertebrae and the forked bones of the colossal skull are themselves of no small magnitude.⁸⁹

⁸⁸ Olaus Magnus, XXI, xx.

⁸⁹ Olaus Magnus, XXI, xxii, xxiv.

Few authors discuss the means of construction of whale bone houses or structures, so even this brief excerpt provides important detail. A lengthier and more complete description of the construction of these houses follows this initial account:

Once the flesh and internal organs of the massive beast have wasted away and perished, only the bones remain, in the shape of a huge keel. After the skeleton has eventually been cleansed by rains and fresh air, strong men are enlisted to erect it in the form of a house. The one who is supervising its construction exerts himself to put windows at the top of the building or in the monster's sides, . . . The doors are made from the creature's hide, which has long since been stripped off for this or some different purpose and hardened by the rough winds. . . .⁹⁰

Within the main framework of the structure, additional bones were used to subdivide the house interior to allow room for livestock, "...as the fashion is in other houses of wood."⁹¹ Such internal subdivisions were typical of Norse longhouses built by the ancestors of those whom Olaus studied, although Viking Age and medieval Norse longhouses were predominantly made of wood, turf or stone. We are not told whether these whale bone houses were permanent structures or temporary shelters which may have been constructed by hunter-fisher parties.⁹² We are told, though, that the 'Ichthyophagi' of Iceland, also "construct [buildings] from the ribs and other bones of sea-beasts."⁹³

Ichthyophagi are one of the famous Plinian races, also called the 'monstrous races' of classical thought, peoples of geographical remoteness usually found on the margins of society or beyond. The Plinian races were identified by aberrant physical characteristics and behaviors, both of which signaled their moral deviance. Like the creatures of the bestiary, the monstrous races were used to teach lessons of faith to medieval audiences. Yet most of these monstrous races were located in Asia or Africa, not in Europe. While Olaus says nothing else of these Ichthyophagi, the whale bone houses appear elsewhere in his narrative. In book two, 'The Wonders of Nature in the North,' he describes the reports of shipwrecked French and Spanish sailors in Greenland:

⁹⁰ Olaus Magnus, XXI. xxii, xxiv. As discussed in chapter five, the bones were only used after they had been 'cleansed by rains and fresh air.'

⁹¹ Olaus Magnus, XXI, xv.

⁹² Smith and Kinahan report that the Khoi of Namibia built whale bone huts as "temporary campsite[s] of peoples exploiting marine resources..." (89).

⁹³ Olaus Magnus, XXI, iv.

“[They] saw men’s dwellings on the shore that looked like boats turned keel upwards; and so it was, for the natives make houses out of the ribs of whales, as if they were massive timbers, carefully covering them with moss and brushwood to keep off the snow and rain.”⁹⁴ In book four, ‘The Wars and Customs of the Pagan Dwellers in the Wild and their Neighbors,’ Olaus reiterates the point that the dwellers in these houses, often semi-subterranean, spend most of their time in their “cells or vaults, built from the ribs and other bones of sea-beasts.”⁹⁵ Olaus makes no distinction in either account between whales and beasts, assuming the creatures to be equivalent.

These houses, while sounding somewhat fantastic, are not Olaus’ invention. In Europe, Asia, Africa and the Middle East, classical and medieval authors contend that ‘natives’ used the jaw bones of great sea monsters or whales in the construction of houses, especially for doorways, arches or roof beams.⁹⁶ Greek authors Strabo and Arrian, repeating Nearchus’ account of Alexander’s troops’ voyage through the Indian Ocean, described these whale bone houses:

Now and again a few of these whales come ashore, having been stranded on the flat beaches at ebb tide. Often, too, they are flung up on dry land by a violent storm. Then they die and rot. When the flesh has mouldered away, the skeletons are left, which the inhabitants of these shores use for building their houses. The large bones at the side form the beams of their houses, the smaller ones the laths. From the jawbones they make doors.⁹⁷

Pliny reports that the Gedrosi “make the doorways of their houses from the monsters’ jaws and use their bones as roofbeams; many bones have been found that were almost 60 feet in length.”⁹⁸ Ribs and jawbones were not the only bones useful for architecture. Arrian described another settlement where different types of whale bone houses were built: “The richest among them have built huts; they collect the bones

⁹⁴ Olaus Magnus, II, x.

⁹⁵ Olaus Magnus, IV, ii.

⁹⁶ Such uses of whale bones, particularly as arches, doorways or gates, will also be discussed in relation to ethnographic examples of monumental whale bone architecture in the following chapter. Nicholas Redman’s *Whales’ Bones of the British Isles* (London: Redman Publishing, 2004), provides a photographic index and description of decorative and functional whale bone constructions across Britain.

⁹⁷ R. Ellis, *Men and Whales* (New York: Alfred A. Knopf Inc., 1991b), 33; Arrian *Anabasis Alexandri (Books V–VII)*, *Indica (Book VIII)*, trans. E. I. Robson (Cambridge: Harvard University Press 1978), VIII, 30, 8–9.

⁹⁸ Pliny the Elder *Natural History* (New York: Penguin Books, 2004), IX. vii.

of any large fish which the sea casts up, and use them in place of beams. Doors they make from any flat bones which they can pick up. But the greater part of them, and the poorer sort, have huts made from the fishes' backbones."⁹⁹ Archaeologically, such uses of whale bone are seen throughout the world, from the Canadian Arctic to the coasts of Africa and the islands of the North Atlantic.¹⁰⁰ Many of the cultures that used whale bones in their house construction lived in areas where wood and driftwood were rare or valuable commodities, as was the case in Arctic Norway and Iceland. Whale bone provided one of the few raw materials of considerable size and strength that was also manageable as a building material.¹⁰¹ In addition to houses, Olaus informs us that interior furnishings, including seats and tables, were also crafted out of whale bone, echoing al-Idrīsī's account. Olaus repeats Pliny's assertions of whale bone use in the Indian Ocean: "There are also people who use the whale's backbone, that is, the hollowed vertebrae, as mortars for pounding spices."¹⁰² It appears, both ethnographically and archaeologically, that vertebrae were the favored bones for household furnishings and tools.

The most interesting feature of Olaus' study of these structures is his contention that the houses were thought to retain some of the character or force of the whale. The house is given meaning and purpose on at least two levels, serving as a domestic space and simultaneously retaining some elements of its animal nature. This connection between the

⁹⁹ Arrian, VIII, 29, 16.

¹⁰⁰ One of the most famous European archaeological sites, the Neolithic site of Skara Brae on Orkney, reveals the architectural use of whale ribs and skull fragments used as rafters and wall construction material. The Irish site of Inishkea also produced whale vertebrae used in wall construction. V. G. Childe, *Skara Brae: A Pictish Village in Orkney* (London: Kegan Paul, Trench, Trubner and Co., Ltd., 1931); G. Clark, "Whales as an Economic Factor in Prehistoric Europe," *Antiquity* 21, no. 81 (March 1947): 84–104; J. Fairley, *Irish Whales and Whaling* (Belfast: Blackstaff Press Limited, 1981); J. O'Connell and K. Hawkes, "Hadza Hunting, Butchering, and Bone Transport and their Archaeological Implications," *Journal of Anthropological Research* 44 (1988): 113–161; Smith and Kinahan, 1984; F. Henry, "Remains of the Early Christian Period on Inishkea North, Co. Mayo," *Journal of the Royal Society of Antiquaries of Ireland* 75, no. 3 (1945) 127–154.

¹⁰¹ While the bone would be immensely strong, it would also be very heavy and perhaps more difficult to manipulate and work than most woods. It also could seep oil for years if not properly exposed and cleaned upon butchery. When unprocessed bones were used architecturally, the chance for oil seepage was even greater. Despite these drawbacks, whale bone may have lasted a great deal longer than wood in many environments; J. Savelle, "Architectural Utility in the Formation of Zooarchaeological Whale Bone Assemblages," *Journal of Archaeological Science* 24 (1997): 869–885.

¹⁰² Olaus Magnus, XXI, xxiii.

live animal and the animal as resource is taken further by Olaus, who contends that the Arctic Norwegians believed that the whale whose bones sheltered the household became the subject of the dreams of those who dwelt within: "Those who sleep inside these ribs are forever dreaming that they are toiling incessantly on the ocean waves or, harassed by storms, are in perpetual danger of shipwreck."¹⁰³ The dreamer, encased within what was the body of the whale, experienced the whale's journey in the seas and perhaps even its ultimate demise in the very tempest which washed it ashore and provided its bones to the occupants. While it could be argued that this dream is a biblical allusion, perhaps to Jonah's ill-fated voyage, it can also be related to the Icelandic folk-concept of the 'skipper effect.' According to this popular folklore among Icelandic fishermen, the best fishing boat skippers are inspired by dreams to find the best fishing locations.¹⁰⁴ Perhaps the dreams inspired by whale bone houses were an earlier form of this folk belief of a fisherman's or whaler's connection to the sea. Regardless of the meaning of the vision, the connection between animal and resource remained strong and symbolic among those who relied most upon the sea for subsistence and survival.

Olaus Magnus' description of whales in both *Carta Marina* and *Historia* perpetuate long-held myths and traditions of marine creatures, more than the earlier *Kǫng's Mirror*, because Olaus relied less on personal observation and experience. His medieval insistence upon the authority of ancient and early sources prohibits a more detailed or realistic look at the whales of the northern seas. Where Olaus' authority is most evident, though, is his unique perspective on the peoples of the north and their resourcefulness. The range of uses of whale products is great and Olaus clearly is not bothered to determine whether the products were derived from whales or monsters, terms which he uses interchangeably. While the *Kǫng's Mirror* was also directed towards a noble audience, that audience was a local nobility attuned to the local environment. The simplistic view of whales offered by Olaus would not suffice among more maritime-savvy Norwegians, particularly since what Olaus reported was purported to be a realistic account of the northern world.

¹⁰³ Olaus Magnus, XXI, xxiv.

¹⁰⁴ G. Pálsson and P. Durrenberger, "To Dream of Fish: The Causes of Icelandic Skippers' Fishing Success," *Journal of Anthropological Research* 38 (1982): 227.

The texts surveyed thus far reveal numerous examples of variations on a well-worn myth, but variations with nuance and complexity. The whales of the North Atlantic, it seems, were seen by some as common medieval stereotypes, monstrous, massive, and always useful. They speak to Norse mythic, religious and cultural traditions. This study now turns to the most complex and comprehensive medieval Norse evidence for whale use, the complex laws dictating whale capture and division, and the numerous saga reports of stranded whales as the subject of seemingly frequent feud. Combined with interdisciplinary and archaeological evidence, these legal and literary sources for whaling take on new relevance.

CHAPTER SEVEN



BLUBBER MISSILES AND WHALE RIDERS: MUNDANE FISHES AND THE SAGAS

Vinland was paradise to the Norse settlers who first landed on its shores around the turn of the first millennium AD. This newly-found land teemed with giant salmon, fields of grain and grasses, plentiful timber and the grapes which gave Vinland its name. For the audience of the so-called Vinland sagas, including *Eiriks saga* and *Grænlandinga saga*, this land was likely as fantastic as the most fabulous whales that swam in the seas.¹ According to *Grænlandinga saga*, when the first settlers led by Thorfinn Karlsefni arrived in Vinland, the natural fruits of the land were plentiful, yet the resource that ensured the survival of the settlers was not the exotic product of this new land: “They then put out to sea in their ship and arrived without mishap at Leif’s booths, where they unloaded their sleeping sacks. They soon had plenty of good provisions, since a fine, large rorqual had stranded on the beach. After

¹ Vinland, or more precisely the Norse voyages to North America, was thought by many to be the stuff of historical myth until the location and excavation of L’Anse aux Meadows by Helge Ingstad in 1961. Most scholars agree that L’Anse aux Meadows is simply permanent camp within a larger region that may be or be adjacent to the land the Norse called Vinland. A. Stine Ingstad, *The Discovery of a Norse Settlement in America: Excavations at L’Anse aux Meadows, Newfoundland, 1961–1968* (Oslo: Universitetsforlaget, 1977).

they had gone and carved up the whale they had no lack of food.”² Even in Vinland, a fantastic land of plenty, the Norse chose time-worn strategies for survival and whales were essential to the Norse subsistence economy. Stranded whales represented prosperity of the sea, the gifts of Njord, Thor, or the Christian God.

Whales in the sagas typically are depicted as a famine resource or a resource sought after by newly-landed settlers. Whales represent salvation of a sort, a prodigious bounty given up by the sea, yet almost never sought out upon the waters in the sagas. The *Fornaldarsögur*, the Legendary sagas, provide a complex and often bizarre portrait of whales as they were perceived by medieval Icelanders, but the *Íslendingasögur*, the Icelandic Family sagas, depict whale use and acquisition in a formulaic but realistic manner. Many whales as shown in the sagas amount to little more than medieval roadkill, conveniently dead and discovered upon the shore. These fortuitous resources, though, were immensely valuable and thus could be the subject of dispute. Whales preeminently served in the sagas as catalysts for human action, provoking conflict, feud, violence or legal resolution. While important sources in the study of medieval whaling, sagas prove more instructive when coupled with the contemporary laws of Norway and Iceland, the greatest sources on medieval whaling. The *Gulathing*, *Frostathing*, and *Grágás* lawbooks, produced between the eleventh and thirteenth centuries, and surveyed in the final chapter, provide unmatched insight into whale use, particularly legal claims, division, and even allusions to acquisition methods.

While the Family sagas and law codes provide the greatest detail on whale use within the medieval corpus, the sources are not without problems. Neither sagas nor laws provide clear insight into how often whales were used, whether they were routinely relied upon or by whom. Furthermore, neither source provides notable detail on perceptions of whales as sources, whether they were chosen sources or famine food only. It seems then that the sagas and laws, at first glance, raise as many questions as they provide answers. Neither source provides much insight into the lives of those who would be most likely to use scavenged resources.

² “Saga of the Greenlanders,” in *The Complete Sagas of Icelanders*, Vol. I., ed. V. Hreinsson, trans. K. Kunz (Reykjavík: Leifur Eiríksson Publishing, 1997), 28.

The sagas are tales of the well-heeled segments of the society. The lot of the lowly cotters, the poor and even middling farmers, are seldom worth the saga-writers' attention unless it immediately impinges on the problems of the wealthier people. The lives and struggles of the poor are for the most part lost to us. We are relegated to the law codes regulating poor relief, labor contracts, debt-slavery, tenancies, or treatment of beggars to try to get some sense of their condition. But these codes only tell us how the enfranchised thought about treating the disenfranchised, not about how they actually treated them....[The] picture of dispute processing and of political and social maneuvering that is the core of saga narrative is a partial picture.³

Details of whale use, like all other information provided by these sources, reflect elite property rights and feuds. The laws occasionally mention the rights of lower classes to stranded resources, but as Andersson and Miller conclude, we cannot reconstruct how or whether laws were actually applied. Both sources require systematic scrutiny to reveal the value of whales in the North Atlantic world.

The sagas were the preeminent form of medieval Icelandic literature, oral traditions codified during the thirteenth century, the Golden Age of saga writing, but depicting the more well-known and tumultuous Viking Age.⁴ The sagas provide a retrospective look at the settlement and early history of Iceland, which has led some scholars to question the historical value of these nostalgic and often anachronistic works. While it is common practice to consider Old Norse texts to be descended from earlier oral evidence, it is also dangerous to assume that economic resources of the high Middle Ages as described in the sagas were equally exploited in earlier periods.⁵ Among the biggest problems historians face in using the sagas are dating and anachronism. It can be difficult to gauge when the authors report accurately on contemporary or historical events or beliefs.⁶ Nonetheless, in many cases, saga evidence provides some of the only historical information on *landnám* and the earliest periods of North Atlantic expansion. The precise historicity of the sagas is somewhat immaterial for this study, as

³ T. Andersson and W. I. Miller, *Law and Literature in Medieval Iceland: Ljósvetninga saga and Valla-Ljóts saga* (Stanford, CA: Stanford UP, 1989), 6.

⁴ As described in the introduction, medieval chronologies may be subdivided in innumerable ways. The Viking Age is broadly defined as the ninth through eleventh centuries.

⁵ P. G. Foote, "Some Account of the Present State of Saga-Research," *Scandinavica* 4 (1965): 115–126.

⁶ Andersson and Miller, 4.

these sagas are not used to reconstruct actual whale stranding events or precise claims between individuals fighting over stranded whales. The sagas are used here to discern medieval North Atlantic attitudes and actions towards whales.⁷

The sagas have been divided into several sub-genres including *Konungasögur* (Kings' sagas), *Biskupasögur* (Bishops' Sagas), *Riddarasögur* (Knights' sagas), *Samtiðargögur* (Contemporary sagas), *Fornaldarsögur* (Legendary sagas) and the most famous genre, *Íslendingasögur* (Family sagas). These divisions are not historical, but were imposed upon the sagas as late as the nineteenth century and thus are still subject to debate. Each putative genre, though, seems to have served a different purpose in medieval North Atlantic cultures, from history to myth to edification to entertainment.⁸ "As soon as the reader commences reading he more or less unconsciously interprets the generic signs which tell him what kind of world he is in and thus what to expect.... [If] he is reading a *fornaldarsaga* he will expect to find supernaturally strong characters developing in a world of wonders, whereas if he is reading a historical account... he will expect people like him acting in the same world as his own."⁹ In short, a whale in the *Fornaldarsögur* must be seen and interpreted very differently than a whale in the *Íslendingasögur*. Sometimes a whale is a just a whale, sometimes not.

The medieval audiences of the *Fornaldarsögur* or other sagas saw no disjunction between literature and history and no conceptual conflict: "the saga represents a world that is aware of the past, which is often idealised, and relates the past to its own present, thus it is rooted in history."¹⁰ Even though they include fantastic material, namely zombies, trolls, and magical events and creatures, sagas should not be dismissed as ahistorical. The presence of the fantastic, miraculous or supernatural does not negate the historicity of the text. The Old Norse-Icelandic corpus fits neatly within the medieval acceptance of and dependence

⁷ While nuance and local custom surely developed within a few centuries of each new colony's foundation, this study posits, given the close contact maintained by Norse North Atlantic communities, a broad and shared culture that dictated common perceptions of the natural world.

⁸ While there is underlying structure and rationale within these groups, other forms of organization have been suggested; see T. Tulinus, "The Matter of the North: fiction and uncertain identities in thirteenth-century Iceland," in *Old Icelandic Literature and Society*, ed. M. Clunies Ross, 252 (New York: Cambridge University Press, 2000).

⁹ Tulinus, 250.

¹⁰ M. Clunies Ross, *Prolonged Echoes: Old Norse myths in medieval Northern society. Volume 2: The reception of Norse myths in medieval Iceland* (Odense: Odense University Press, 1998), 48.

upon the miraculous and the malevolent forces at work within God's world, or the pre-Christian universe peopled by countless supernatural beings. The distinction between history and literature is a modern problematization of a medieval cultural and textual reality.

The sagas combine the recounting of historical events, including the settlement of various North Atlantic countries, the political dramas of Scandinavian kingdoms, personal feuds, and genealogies, with embellished narratives, dialogues and verse. Their purpose is clearly multifold, but their political import must not be overlooked, particularly given the period within which they were produced. "In Iceland, the patrons of saga writing appear to have been those dominant families of the late twelfth and early thirteenth centuries whose independent power was threatened by the growing interference of the Norwegian king in Icelandic political and economic life. In each case, one response of those under political threat was to create their own kind of history. . . ."¹¹ The sagas, in short, are not simple prose narratives. They are complicated literary renderings of a host of historical, political and social issues.

This survey of whales and sagas begins with the most legendary of the sagas, the *Fornaldarsögur* of the thirteenth and fourteenth centuries, works that borrow liberally from medieval romance, yet with a unique northern perspective. The *Fornaldarsögur* are among the lesser-known and latest products of the medieval Icelandic scriptoria.¹² These clever tales are a convenient segue between the mythic whales heretofore discussed and the more realistic portraits of whales and whale use that will be seen in the Family sagas.



The Legendary sagas, also referred to as the 'romances' or the 'heroic sagas,' are heavily influenced by medieval European themes and traditions. Andersson notes that they are not a "homogenous literary genre

¹¹ Clunies Ross, 1998, 56.

¹² The accepted date of composition of the sagas was long felt to be the twelfth and thirteenth centuries, although recent scholarship has tended to date most saga composition to the thirteenth and fourteenth centuries. A. Friðriksson and O. Vésteinsson, "Creating a Past: A Historiography of the Settlement of Iceland," in *Contact, Continuity, and Collapse: The Norse Colonization of the North Atlantic*, ed. J. Barrett, 139–162 (Turnhout, Belgium: Brepols Publishers, 2003).

but . . . a literary assemblage of texts” first put together in the nineteenth century and subsequently erroneously classified as a separate genre of the saga tradition.¹³ The full name given to this genre is *Fornaldarsögur Norðurlanda*, or the Legendary sagas of the northern lands. They purport to tell tales of Norway and northern lands long before the Saga Age: “Legendary sagas sometimes retell versions of historical events that we know more reliably from chroniclers, e.g., the defeat of the Huns in the middle of the fifth century; but just as often, they mine the Beowulf-stratum, reaching back to the undatable, unsubstantiated hero-figures of Germanic antiquity.”¹⁴ These sagas are seen as Scandinavian responses to European literary themes, stories that incorporate great heroes of the northern world into European chivalric tales. Possessing qualities of early myth, the Legendary sagas are told like high medieval romances, leading one scholar to refer to these fourteenth century tales as “chronologically schizophrenic.”¹⁵ Like the romances of European tradition, these sagas feature exotic and distant locales, although their main settings are within Scandinavia and north. The Legendary sagas do not provide insight into the rudiments of whale use as do the Family sagas, which recount strandings, legal divisions of whales, whales floating in fjords as resources to be claimed and whale meat snapped up in famine. Rather, the Legendary sagas describe shapeshifters who transform into brawling whales or trollwomen who ride whales into battle. These sagas, while fitting within broader European chivalric themes, also can be seen as reflections of longstanding mythological traditions of the Norse, starting with their earliest myths of the pagan Gods and monstrous creatures.

Brawling whales and witch riders are only two of a number of marine monsters of Norse myth, creatures more original than the pan-European monstrous whales. Monstrous sea creatures were central within Norse mythology, the preeminent example being the Midgardsormr, the massive sea serpent set upon by Thor in a famous fishing expedition, and a creature that ultimately would rage and ruin at Ragnarok. Midgardsormr was not a simple monster, but a gigantic serpent that encircled

¹³ T. M. Andersson, “Old Norse-Icelandic Literature,” in *Early Germanic Literature and Culture*, eds. B. Murdoch and M. Read, 196 (Rochester, NY: Camden House, 2004).

¹⁴ S. Ballif Straubhaar, “Nasty, Brutish, and Large: Cultural Difference and Otherness in the Figuration of the Trollwomen of the Fornaldar sögur,” *Scandinavian Studies* 73, no. 2 (Summer 2001): 108.

¹⁵ Straubhaar, 108.

the earth, binding the world together. Without it, the world could not exist, yet its presence was also an enduring challenge to the gods. The sea itself was alive with creatures and subject to the control of several great gods, most notably Njord, the god of seafaring and ships and the preeminent god in Western Norway. Njord's value to the West Norse, seen in numerous place names dedicated to him, reflects both their fear and respect for the sea: "he controlled the winds and the sea, and brought wealth to those whom he helped in fishing and seafaring."¹⁶ The early Norse seafarers who set out upon the North Atlantic would have prayed to Njord for success upon the sea and safety from both the waters and the creatures within. The Legendary sagas exemplify some of the wonder and character of early Norse mythology. Each of the whale episodes of the Legendary sagas offers a unique view of the Norse monstrous whale and perhaps regional variations on broader pan-European traditions.

The whales described in the Legendary sagas display some of the same fantastic and fearsome attributes of the monstrous whales described in countless medieval traditions. These whales are active and aggressive and thus unlike the stranded whales typically seen in the Family sagas. While the whales of the Legendary sagas are occasionally depicted as resources, they are more so literary flourishes with deep mythological and pagan roots. The power, force and ferocity of whales are depicted with playful aplomb in these sagas.

Örvar-odds saga and *Friðþjófs saga* present what may be the most conventional views of whales in the Legendary sagas.¹⁷ In both sagas, whales serve evil masters and are sent as messengers against the tales' protagonists. *Örvar-odds saga*, or Arrow-Odd saga, is a reworking of the *Physiologus* and bestiary theme of the island, featuring two monstrous whales, Sea-Reek (*Hafgufa*) and Heather-Back (*Lyngbakr*). Both creatures were sent against the eponymous hero Odd by his nemesis Ogmund Eythjof's-Killer. Sea-Reek was the largest monster of the seas, able to swallow up men and ships and any other great bounty of the ocean. This creature embodied the great gaping-mawed giant whale of the *Physiologus* or even worse, the kraken. Heather-Back was the island whale of the *Physiologus* tradition, complete with foliage and heather upon

¹⁶ H. R. Ellis Davidson, *Gods and Myths of Northern Europe* (New York: Penguin Books USA Inc., 1964), 132.

¹⁷ "Orvar Odd," in *Seven Viking Romances*, trans. Hermann Pálsson and Paul Edwards (New York: Penguin Putnam Inc., 1985), 25–137.

its impressively insular back. Like other whale-islands, Heather-Back drew sailors upon its back, only to dive into the depths and drown all those aboard.

The whale of *Friðþjófs saga* was also controlled by a malevolent rival, namely King Helge, who sought to divert Friðþjóf on his journey to Orkney. Friðþjóf reported to his fellow sailors: "I see a marvelous sight. A great whale encircles the ship, and I suspect that we must be near some land, and he would let us from the land. I see two women on the whale's back, and they must wield this hostile storm with their worst spells and magic."¹⁸ Following the defeat of the witches, completed with the aid of Friðþjóf's magical ship *Ellidi*, "the whale dived under and departed and was seen no more," and Friðþjóf and his crew sailed on to Orkney.¹⁹ In these tales, whales are the familiar monsters of European tradition, possessed or controlled by evil spirits.²⁰ However, force, not faith, defeats these whales, perhaps a testament to the strength of the great Viking ancestors rather than the Christian beliefs of the sagas' scribes.

More unusual whale episodes occur in three of the Legendary sagas: *Hjálmþés saga ok Ölvis*, *Hálfðanar saga Eysteinnssonar*, and *Ketils saga Hængs*. In these tales, the whales, demonic and aggressive, are not really whales. Rather, they are shapeshifters, trolls, ogres and giants or giantesses. Whales are the forms chosen by wicked beings to battle and bewitch the stories' protagonists. Hálfðan, of the eponymous saga *Hálfðanar saga Eysteinnssonar*, is the picture of high medieval European heroism, both honorable and forceful and somewhat removed from the archetypal Viking Age hero: "He was a quiet, handsome-looking man.... and a great leader...[who] from the very first showed every quality that deserves praise..."²¹ In one of the most unusual battles of the saga corpus, Hálfðan faces magical Lappish warriors whose powers include self-healing amputations, wizardry and shape-shifting. Norse tradition recognized that their northernmost neighbors the Saami, whom they referred to as 'Lapps,' had supernatural powers. One of these magi-

¹⁸ "Saga of Fridthjof the Bold," in *Medieval Narrative: A Book of Translations*, ed. M. Schlauch (New York: Prentice-Hall, Inc., 1934), 17–17.

¹⁹ "Saga of Fridthjof the Bold," 18.

²⁰ R. Muir Wright, "The Rider on the Sea Monster. 'Quid gloriaris in malitia...'," in *The North Sea World in the Middle Ages: Studies in the Cultural History of North-Western Europe*, eds. T. Liszka and L. E. M. Walker, 70 (Edinburgh: Four Courts Press, 2001).

²¹ "Hálfðan Eysteinnsson," in *Seven Viking Romances*, trans. Hermann Pálsson and Paul Edwards (New York: Penguin Putnam Inc., 1985), 171.

cal warriors in the battle with Halfdan is a Lappish king named Finn. When Halfdan seems to gain the upper hand in battle by amputating the bow-hand of the Lappish king Floki, Finn strikes out, but not with bow, sword or spear. His battle strategy is unlike any other: "Seeing this, the other Lappish king, Finn, turned himself into a whale. He hurled himself on top of the men who were fighting him and crushed fifteen of them to death beneath him."²² Although Finn finally was defeated in a most inglorious way, mauled and eaten by Halfdan's dogs, the spectacle of a whale emerging in the midst of battle is both ridiculous and resonant with the demonic whale traditions.

The Legendary sagas do not adhere to the typical themes seen in the Family sagas as will be seen later in this chapter, but they do include two whale strandings, in *Ketils saga Hængs* and in *Gríms saga Loðinkinna*. The events that surround the scavenging of the whales, though, are not your average fare. In *Ketil Trout's saga*, a great famine, a common theme in the Family sagas, fell upon Ketil's farm at Hrafnista, Norway. The famine was so severe that "even the fish furthest from land grew scarce, and the crop failed."²³ Ketil had no choice but to head north on a fishing trip. As he came to shore at a location called Skrofum, he encountered a hideous troll-woman "in a bearskin kirtle on a peninsula. She had just risen from the sea and was black as pitch. She sneered beneath the sun."²⁴ Forað the troll-woman boasts and boils, threatening Ketil without cause, and her aggressive threats stir Ketil to action. As Ketil raises his bow to strike her down, Forað transforms into a whale and dives into the sea. Ketil's arrow hits home, though, in a metaphoric rape, striking her under the tail. Ketil grins and boasts: "It will go as fate shapes it; Forað is no noblewoman and now her bed is undesirable."²⁵ While the symbolism of Ketil's subjugation of the troll-woman clearly has sexual and hypermasculine overtones, it also reflects precisely the shot that any whaler would make in one of the key wound zones for injury and bleeding of a whale. The shot was both a proper whaler's strike and a reassertion of Ketil's masculinity against the unnaturally masculine troll-woman. Upon defeating Forað, who seemingly controlled

²² "Halfdan Eysteinnsson," 191.

²³ "Ketils saga Haengs," at *Northvegr Foundation* http://www.northvegr.org/lore/sagas_oi/024.php (accessed October 2005).

²⁴ "Ketils saga Haengs," ch. 5.

²⁵ "Ketils saga Haengs," ch. 5.

or bewitched the fishing grounds, Ketil lands a great catch of salmon and continues on his way.

Several of the Legendary whales have some association with giantesses, witches or troll-women like Forað. One possible explanation of the equation of maritime activities and these troll-women is found in the cultures of northern Arctic Norway, specifically the Saami. The troll-women are described as huge, ugly, lustful and always inappropriately dressed, their short skirts leaving little to the imagination. These depictions of northern troll-women are in part mythic but also may be xenophobic renderings of Saami women.²⁶ In *Ketils saga*, Forað is inappropriate and hideous. Likewise, in *Gríms saga Loðinkinnna*, Grim Shaggy-Cheek meets troll-woman Geirrid Gandvik-Bed, who is described as “long-faced, hard-faced, hook-nosed...wobbly-howled, filthy-faced...[and] hardly kissable.”²⁷ What really distinguishes these women from their more civilized Norwegian counterparts is their behavior and their transgression of medieval gender boundaries. Not only do the troll-women compose threatening and boastful poetry, much like the greatest Viking warriors, but they perform hunting tasks that were reserved for men in Norwegian society. Consideration of northern ethnography helps make some sense of the maligning of the trollwomen: “[Early] modern Scandinavian observers of the Saami found their flexibility relative to gendered tasks baffling: the women could fish and cook on journeys, for example, although both jobs were customarily men’s work at home.”²⁸ As early as Tacitus’ *Germania*, northern Germanic women were seen as cultural aberrations, like these troll-women in the Legendary corpus. Tacitus described the ‘Finns’ or ‘Fenni’ in this way: “The Fenni are astonishingly savage and disgustingly poor. They have no proper weapons, no horses, no homes. They eat wild herbs, dress in skins, and sleep on the ground. Their only hope of getting better fare lies in their arrows, which, for lack of iron, they tip with bone. The women support themselves by hunting, exactly like the men; they accompany them everywhere and insist on taking their share in bringing down game.”²⁹

²⁶ Straubhaar, 109–110.

²⁷ “Saga of Grim Shaggy-Cheek,” at *Northvegr Foundation*, trans. P. Tunsall http://www.northvegr.org/lore/sagas_oi/024.php (accessed October 2005).

²⁸ Straubhaar, 110.

²⁹ Tacitus *Agricola and Germania*, trans. H. Mattingly (New York: Penguin Books, 1970), 141.

Behavior as much as appearance singled out these troll-women as different and threatening and their presence in fishing and hunting grounds was seen as inappropriate and unlucky. While the troll-women were present, no fish or whales were to be had in either *Ketils saga* or *Grims saga Loðinkinna*. Once the troll-women were defeated, either through sexual conquest or force of arms, the fish returned or the hunt succeeded. In the *Saga of Grim Shaggy-Cheek*, famine threatens Grim's farm and valley in Halogaland, so the hero sets off to the Arctic north for fish and whales. Grim has no easy time of it. He killed several trolls who had driven away all the fish and fought Hreidar the Rash for a stranded rorqual. Grim faced death until he was saved by a most hideous troll-woman, Geirrid Gandvik-Bed. For all her physical failings, Geirrid ensured Grim's survival after the battle over the whale. Eventually he agreed to lie with this sexually voracious troll-woman, as troll-women are wont to be, and only then was she revealed to be Grim's bewitched bride Lofthæna. Thereafter, order was restored and Grim and his betrothed returned to the hunting grounds whereupon they found "[a stranded] whale" in every bay."³⁰ Uncontrolled women on the fishing and hunting grounds had to be subdued, for their presence negatively influenced men's hunting prowess. Their conquest reestablished masculine dominance and order and the whales and other resources therefore returned.

Thus far, the troll-women of the *Fornaldarsögur* are among the few women to have been mentioned in this survey. Northern tradition dictates that women and whales, women and the sea for that matter, do not go well together. The negative association in Old Norse and Old Icelandic literature between women and nature, both seen as potentially dangerous and uncontrollable forces, is the subject for another work. We have little way of knowing how women participated in ancient whale drives, whale hunting, or even whale scavenging. The implication in the Legendary sagas, though, is that the uncontrolled troll-women drove away fish, hoarded whales or controlled both. The negative association of troll-women and whales is not simply a convention of the sagas. An interesting connection between malevolent women and whales occurs throughout North Atlantic history and folklore. The endurance of this tradition requires scrutiny as it attests to a striking degree of cultural conformity. It is not, of course, the case that if one element of whaling

³⁰ Straubhaar, 110.

tradition survives all others must as well, but the longstanding affiliations of women, whales and hunting failure deserves some attention.³¹

V. U. Hammershaimb, “the founder of the Faroese written language,” mused that the exclusion of women from Faroese whaling activity was meant to provide a less-pressured work atmosphere for the men: “I wonder about the old story that a whale hunt would be unsuccessful if clergymen and women watched from the shore. Would that not be because the men were embarrassed by those people seeing their behavior in the whale kill?”³² When women did encroach upon men’s

³¹ Faroese women traditionally did not participate in significant communal activities, including the whale drive, an event that allows men to socialize and bond. Historically, though, women were known to take part in several aspects of the *grind*. Women frequently lit the *grindaboð* fires, women routinely prepared the *grind* meat and women participated in the *grindadansur* following the whale drives. Old women sat out over the freshly killed and numbered *grind* to protect them from animal scavengers (Jonathan Wylie and David Margolin, *The Ring of Dancers; Images of Faroese Culture* (Philadelphia: University of Pennsylvania Press, 1981), 119). Even in the late nineteenth and early twentieth century, women in the Faroes or Orkney were allowed to participate in the drives when there were not enough men or when the *grind* was particularly large. Women were not considered typical or even appropriate whalers. Today, women’s roles in the whale drive are less regulated and women are now “...not forbidden to help, [though] they are not much in evidence in the lines of people hauling the whales to land” (Wylie and Margolin, 111–112). Despite these occurrences of women’s role in the *grind*, women traditionally were banned from participating in the drive and the kill and women could be banned from even watching the final drive. Recent decades have witnessed a change in this practice, as women are allowed to bring home whale meat from the drive and to participate, at least in minor ways (Steinbjørn B. Jacobsen, “Søtur er sjalvgivin biti (About pilot whale meat),” *High North Alliance* http://www.highnorth.no/Library/Hunts/Faroe_Islands/so-er-sj.htm (accessed October 1998).

1–3). Pregnant women, along with the clergy, were particularly unwelcome to witness the drive and kill, “...as their presence was regarded as unlucky” (J. Pauli Joensen, “Faroese Pilot Whaling in the Light of Social and Cultural History,” *North Atlantic Studies: Whaling Communities* 2 (1990): 183). Pregnant women, it was thought, could make the *grind* change course or make them violent (Wylie and Margolin, 111).

³² Hammershaimb quoted in Joensen, 1990, 183. The prohibition of women from the whaling activities had more depth than merely preventing the embarrassment of men, even though this may be the underlying social cause for long-standing cultural practices. Faroese culture dictates strongly divided labor roles for men and women, to the extent that men refuse to do what is considered ‘women’s work,’ which, not surprisingly, is centered almost exclusively around the household. Women’s space is typically considered to be either the home or the village and when women do tend to the fields, they are generally restricted to the infield and, in the summer, to the outfields to tend to the cows (E. Vestergaard, “Space and Gender in the Faroe Islands,” in *North Atlantic Studies: The Faroe Islands* 1, no. 1 (1989): 34). The mountains, the rough land, and the sea are exclusively men’s domain. Only men possessed the civilizing force which allowed them to travel across the mountains and the sea and to overcome, at least temporarily, the malicious wild forces of those places: “Here [the sea and the mountains], the men, who are society and the agents of culture, are seen as cultural

domain, the combination was potentially dangerous, as depicted in the troll-women of literature.

[Men] are exposed to the non-controllable in these 'wild territories', the non-social natural forces which can do them harm in the same way as the female forces if they were not controlled by men. Conceptually the natural forces outside society and the female forces innermost in society are linked together in such a way that no distinction is made between female forces and natural forces when out in one's 'wild'.³³

Added to this dangerous mixture is the presence of witches and sea-folk, common to Icelandic, Faroese, Orcadian and Shetland folklore and in the *Fornaldarsögur*. Women who participated in the whale drive or any aspect of whaling, therefore, were transgressing social and natural boundaries. Given the usual chaos during hunts and drives, the addition of women would produce greater frenzy and possibly danger. Women and whales simply equaled trouble.

A nineteenth-century account of whale hunting in Shetland describes aggressive and dangerous whales, but one whale was more demonic than any other. This was no whale, but a shapeshifting Shetlander named Betty:

Indeed some of these monsters are not held to be altogether canny, and I recollect seeing and fleeing from one which was firmly believed to be no true whale at all, but just Betty somebody—a reputed witch. I venture no opinion, but I give it on my personal testimony that several towards whom Betty had ill will were scared by the creature!³⁴

Another whale-witch story occurs in Orkney, involving another Shetlander, a woman thought to be a witch. The 1910 *Orkney Herald* reported this story:

In connection with the whale-driving times at Scapa, I may mention that about sixty years ago, or probably a little more, one young man who desired to get into one of the boats was not permitted. His mother, a Shetland woman, at this was very wroth. She prayed that no more whales would be sent to Scapa. She then went a few paces into the sea near Nether Scapa, and with her thimble finger bored a conical pit

beings in areas of nature which they can use, but not control" (Vestergaard, 35). The conventional analogies between women and nature and men and culture are not unique to Faroese society.

³³ Vestergaard, 36.

³⁴ A. Sandison, "Whale Hunting in the Shetlands," *Saga-Book of the Viking Club* 1 (1916): 44.

in the sand, in the centre of which she pressed down her thimble and there left it. In some incantation she then pronounced her malediction or ‘malison’ and proclaimed to the world that until her ‘thimble was found there would be no more captures of whales at Scapa.’ In hope of removing the spell, the thimble was often searched for, but never found, and with the exception of a capture of 20 whales 50 years ago, there has been none of any importance since the ‘thimble incident’ of which there are various slightly different versions, which, however, have common foundation in fact.³⁵

The association between whales and witches could hearken back to the traditions found in the sagas of the controlling troll-women. Notably, in the traditional folklore from Orkney, both women happened to be foreigners, specifically Shetlanders, just as the troll-women in the *Fornaldarsögur* were foreign or northern women.

Folklore from both Orkney and Shetland was described in the early twentieth century as “decidedly Scandinavian in character, as many of the surviving beliefs, practices, and tales are identical with those lately current in the Faroe Islands, Iceland and Norway.”³⁶ Within this folklore there exists a rich body of maritime lore, rife with a host of sea creatures and water-beings, including many of the creatures described in the *King’s Mirror* and other sources. Water-horses, Selkies or seal people, mermaids, mermen and sea elves sound mischievous and dangerous, but the monsters of the sea were terrifying. The Sea-troll was described in a variety of ways, but one common appearance of this creature was the form of a whale: “Whales that went through nets and spoiled them were considered by some as sea-trolls, or agents of the Devil in whale shape.”³⁷ Sea serpents and sea-witches abounded in the early modern North Atlantic, described only decades ago with the same malevolent attributes as the centuries-old troll-women shapeshifters of the *Fornaldarsögur*.



³⁵ “Old Hearths—Scapa and District—II,” *Orkney Herald*, 23 February 1910.

³⁶ J. A. Teit, “Water-Beings in Shetlandic Folk-Lore, as remembered by Shetlanders in British Columbia,” *Journal of American Folklore* 31 (April–June 1918): 181.

³⁷ Teit, 196.

Not all of the sagas are exciting and entertaining romantic fictions like the *Fornaldarsögur*. The sagas also should be seen as complex political narratives, documenting the heroes and villains and great social actors of the first centuries of Icelandic civilization. The period of the Icelandic Commonwealth, ca. AD 930 to 1262, produced the social and political fodder for the sagas. It was an important period of travel, settlement and political centralization, an era eventually enshrined as history and nostalgia in the sagas and compiled for the Norwegians, Icelanders and other North Atlantic peoples. Part of this great period of exploration and settlement was called in Iceland the Saga Age, ca. AD 930–1050, when the deeds of great Icelanders were set to oral tradition, verse and prose.³⁸ Even with the conversion to Christianity around the turn of the first millennium, the ancestral past and pagan traditions remained the subject matter for much of Iceland's literature in an era of fast and frequent social and political change.³⁹ The two centuries that followed the Saga Age also were a period of great tumult in Iceland and across the North, coinciding with the Golden Age of Old Icelandic literature. By 1262, Norwegian King Haakon IV had finally gained a hard-won foothold in Iceland, bringing it under the authority of the crown and permanently changing Iceland's unique political system. The sagas, it seems, were both political tools for the powerful chieftains under new royal authority, but also essential stories to the cultural memory of Icelanders.⁴⁰

To understand the Family sagas, one must understand the role of their most prominent characters, the *goðar*, the men who arbitrated feuds over whales, when they weren't stealing them from others. The sagas served as historical narratives for the greatest families of early Iceland, and the same great *goðar*, or chieftains, appear in numerous

³⁸ Dating for the 'Saga Age' is not absolute, but conventional; this was the period when the events depicted within the sagas were thought to have taken place. The Saga Age follows the period of Iceland's *landnám*, or land settlement, from AD 870–930 and is encompassed within the more commonly known 'Viking Age,' ca. ninth through the eleventh centuries.

³⁹ Iceland was the preeminent home for literature in the North Atlantic world; the question of why Iceland and not some other region is a difficult question, but seemingly has much to do with Iceland's unique political structure, ecological condition, and her adventuresome population. See J. Quinn, "From orality to literacy in medieval Iceland," in *Old Icelandic Literature and Society*, ed. M. Clunies Ross, 30–60 (New York: Cambridge University Press, 2000).

⁴⁰ J. Jesch, "History in the 'political sagas,'" *Medium Aevum* 62, no. 2 (Fall 1993): 210–221.

sagas. *Ljósvetninga saga*, for example, includes 125 named characters of which seven are major characters in other sagas.⁴¹ One of the major figures of *Ljósvetninga saga*, Gudmund the Powerful, also appears in thirteen other sagas.⁴² Keeping track of these chieftains, their relationships and their deeds is a challenge to a modern reader, but for medieval audiences, these were the famous and infamous figures of history. The interactions that we see among the claimants of whales were often driven and determined by their political relationships, their status, and their political standing.

From 930 until its incorporation into the kingdom of Norway, Iceland was a nominal democracy, a ‘great village’ tempered by the authority of thirty-six *goðar* who influenced, cajoled and threatened, rather than directly governed.⁴³ Chieftains were prominent figures in their districts but also in the larger political divisions of Iceland, the quarters or *þjórdungar*, created by 965. *Goðar* maintained power through economic and social connections with their thingmen, namely the householders or *bændr* living within their districts. While every farmer by necessity was bound by declaration to one of the powerful *goðar*, those bonds were not unbreakable and a *bændr* could change political alliances with a simple public declaration at a thing.⁴⁴

The chieftains together possessed legislative and judicial authority and at the local things or assemblies, which took place throughout the four quarters of Iceland, the common law was upheld and refined. Iceland was a radical political experiment for its day, a land that eschewed the growing power of kings and adapted the earlier socio-political organization of rule by chieftains. As a result, their laws are unique in medieval Europe for their adaptability and originality: “[T]he constitution on which the Icelandic legal system is based is much more the creation of theorists than an organic growth from immemorial custom.”⁴⁵ At the *lógrétta*, or the court of legislation, the *goðar* crafted and refined the laws of Iceland and elected the lawspeaker, who presided over the

⁴¹ Andersson and Miller, 85.

⁴² Andersson and Miller, 86.

⁴³ J. Byock, “Feuding in Viking-Age Iceland’s Great Village,” in *Conflict in Medieval Europe*, eds. Warren C. Brown and Piotr Górecki, 229–241 (Burlington, VT: Ashgate, 2003).

⁴⁴ Andersson and Miller, 8.

⁴⁵ *Laws of Early Iceland: Grágás: The Codex Regius of Grágás with Material from Other Manuscripts. Vol. I*, trans. by Andrew Dennis, Peter Foote and Richard Perkins (Winnipeg, Canada: University of Manitoba Press, 1980), 1.

Althing. The lawspeakers were among the most learned men of the young country, not only committing to memory the growing body of Icelandic law, which they recited in thirds annually, but also serving as keepers of oral traditions. The lawspeakers, alongside various bishops, may have been responsible for codifying or commissioning the writing of both laws and sagas.

The preeminent political affair of the Icelandic year was the fortnight gathering at the Althing, when farmers and chieftains alike came together to present cases, seek judgments, settle disputes and collectively refine the law. As will be seen both in the sagas here and the laws in chapter eight, whales along with other property and resources were frequent subjects of debate at the things and courts. To describe the things as courts is imprecise: “[The] things . . . were really nothing more than meetings of free farmers at which the formal processing of disputes took place and other matters of interest could be discussed.”⁴⁶ True courts of judgment met throughout the year as needed or scheduled to deal with confiscations, property rights or crime. The law and its intelligibility and enforcement, all issues discussed at things as well as in the sagas, were central to Icelandic life. Knowledge of the law was necessarily widespread, because “[law] enforcement was a private matter, [and] . . . people had to protect themselves.”⁴⁷ Criminals did not fear police enforcement or royal justice in Iceland, but rather enduring blood feud that could result from criminal acts or the ultimate threat of outlawry: “Outlawry isolated the defendant, eroded his support, and eliminated any legal liability for vengeance when it came.”⁴⁸ Power in Commonwealth Iceland was found in reputation, relationships and numbers. Whether seeking a judgment, a farm, or a whale, success boiled down to numbers of men whom one controlled and their loyalty.

Within the sagas, we witness the social complexity and tensions of Iceland in the many feuds, arbitrations and judgments that form the central action of these stories. The tensions of early Iceland were not based solely on political plays of haughty nobility as one might find on the contemporary continent. Rather, common Icelanders, both *bændr* and *goðar*, skirmished over intricacies of law, sometimes while simultaneously skirmishing over a whale or some other object of dispute. While

⁴⁶ Andersson and Miller, 6–7.

⁴⁷ Andersson and Miller, 8.

⁴⁸ Andersson and Miller, 27.

voyages, heroes and the fantastic are important elements within the sagas, the Icelandic audience favored stories about the chieftains and their feuds for their realistic depiction of the struggles that occurred, actually or potentially, in their lives.

The great figures of the Saga Age were the most powerful *goðar*, who founded famous farms, engaged in long-standing bloody feuds and resisted royal might. These men were the focus of the Family sagas, the most well-known sagas of the Golden Age.⁴⁹ Nearly half of these Family sagas contain passages regarding the stranding, use or sale of whales.⁵⁰ The whale episodes often highlight the political dramas among the great families of Iceland and whales are effectively the plot contrivance to provoke conflicts. While the Legendary sagas offered examples of whales as servants of troll-women, monstrous shape-shifting whales and a few resource whales, the Family sagas almost uniformly depict stranded whales as simple resources. These whale episodes reveal subtle information on whale use, perceptions of whales and the complexities of human ecology in the medieval North Atlantic. While appearing at times fantastic or formulaic, the sagas offer a remarkably pragmatic view of whale use.



The whales found in the sagas usually are depicted as simple universals. They are frequently rorquals, fine and big, they almost always are stranded and scavenged, and hunting is only rarely alluded to, yet never shown or described. Only two of the Family sagas, *Viga-Glums saga* and *Finnbogi the Mighty*, refer to whales drifting at sea, subject to salvage and towing. Nearly all the Family sagas that depict whale use describe single large stranded rorquals. These whales strand during a period of great famine or hardship, thereby increasing both their value and competition over them. These strandings occur throughout the year, but the majority

⁴⁹ The Family sagas to be surveyed herein include: *Egils saga*, *Kormaks saga*, *Eiríks saga*, *Groenlandinga saga*, *Grettis saga*, *Bardðar saga*, *Viga-Glum saga*, *Postbroeðra saga*, *Reykdaela saga* and *Viga Skutu*, *Finnbogi the Mighty*, *Laxdaela saga*, *Floamanna saga*, *Havard of Ísafjörð*, *Gold Thorir*, *Eyrbyggja saga*, *Gunnar, fool of Keldugnúp*, and *Ljosvetninga saga*. Translations used herein, except where otherwise noted, come from Viðar Hreinsson, ed., *The Complete Sagas of Icelanders*, Vols. 1–5 (Reykjavík: Leifur Eiríksson Publishing, 1997).

⁵⁰ At least sixteen of the forty Family sagas include whale episodes.

of whales strand during the Spring and Autumn, periods when some species might be migrating to or from the North Atlantic.⁵¹ According to Andersson and Miller, “the sagas suggest that famines were often sufficiently localized that people could seek provisions in neighboring fjords or valleys that were less hard hit or had escaped the hardship entirely.”⁵² We must consider that the scavengers of whales could be interlopers in territory outside of their district. From this evidence we could surmise that whales were most frequently scavenged rather than hunted. We should not exclude hunting altogether, as will be seen when considering Old Norse-Icelandic law, but the sagas do intimate that few chose to seek out and consume whales as a first choice. Whales were secondary rather than primary resources and whale meat supplemented agrarian products, particularly during famine or periods of hardship. A *goðar*’s power was measured both in intangible social qualities, but also and especially in tangible wealth, including land, hall, herds, surplus, and disposable wealth that could be given as gifts. Whales represented unexpected and potential wealth, but also hardship resources. Their function in Icelandic society was necessarily secondary as they represented a bounty rather than wealth that could be held.

Survival in the North Atlantic required thorough exploitation of every available ecological niche, particularly in times of famine, settlement and other hardship. Sagas depicted whales alongside fish, seals, driftwood, eggs and birds as important gathered or hunted resources in just such occasions. Numerous sagas depict chieftains, farmers and families scavenging and hunting to make ends meet at crucial periods of need. *Fostbroedra saga* shows Thorgeir and Thormod headed north to hunt, fish and go whaling [*hvölum*] at Strandir owing to harsh winter, starving livestock and bad farming conditions.⁵³ *Gunnars saga Keldugnúps-fífls* recounts how Gunnar and his crew survived in temporary huts at Skuggjörð, supplied by “ample fish, seals and whales to catch.”⁵⁴ Many of the whale episodes in the sagas occur in north and northwestern Iceland, a region broken by numerous fjords and inlets, not unlike the

⁵¹ Not every saga records the precise season or month when these episodes supposedly occurred, but at least ten refer to either Spring or Autumn.

⁵² Andersson and Miller, 1989, 51.

⁵³ “Saga of the Sworn Brothers,” in *The Complete Sagas of Icelanders*, Vol. II, ed. V. Hreinsson, trans. M. Regal (Reykjavík: Leifur Eiríksson Publishing, 1997), 337–338.

⁵⁴ “Saga of Gunnar, The Fool of Keldugnup,” in *The Complete Sagas of Icelanders*, Vol. III, ed. V. Hreinsson, trans. S. Anderson (Reykjavík: Leifur Eiríksson Publishing, 1997), 428.

West Norwegian coast. Such territory would be well-suited to whale drives, both for pods of smaller whales and the driving or wounding of larger whales. The sagas, though, more often make references to a single great whale.

Some whales were simply too large for one community to exploit fully. A stranded blue whale could supply two hundred tons of resources to a district and several whales or a pod could provide even more. Even if blubber was rendered, meat dried and bones processed, a district could be unable to use so much material. The massive size of some cetacean quarry would have necessitated some legal response that ensured reasonable and responsible division. Whales were communal resources, so whale division became one of the preeminent concerns both in the sagas and laws. The whale scavenged in *Flóamanna saga*, in a scene reminiscent of the Legendary sagas, was wrested from the greedy hands of two trollwomen. This hard-won quarry provided “enough food to go around” to the starving shipwrecked sailors in Greenland, but apparently not enough for the trollwomen, too, for they were driven off. Other sagas tell of several farmsteads supplied by one whale with more than enough to spare. *Gull-Þóris saga* recounts that the whale found by Gold-Thorir was more than enough for his farm: “toward spring, during the last month of winter, a whale drifted ashore on an island called Hvallatur. . . Thorir went out and cut up the whale. He took some of it home, but gave some to the people of the district. A large part of the whale still lay there which had not been cut up.”⁵⁵

While most sagas depict whale use in famine, when no whale could be spared, sometimes whales were important commodities for trade or sale. The sale of food was not the norm in the medieval North Atlantic world. Rather, food was produced for subsistence and local consumption. Excess typically was redistributed at feasts in the hall, a prominent public exhibition of a chieftain’s munificence and power. However, “. . . in bad times people tended to acquire stores by purchase, or perhaps theft and raid.”⁵⁶ Such times were the heyday of stranded whales. *Ljósveltinga saga* refers to a great sale of whale meat in northern Iceland.⁵⁷ When a Fin

⁵⁵ “Gold-Thorir’s Saga,” in *The Complete Sagas of Icelanders*, Vol. III, ed. V. Hreinsson, trans. A. Maxwell (Reykjavík: Leifur Eiríksson Publishing, 1997), 337–338.

⁵⁶ Andersson and Miller, 51–52.

⁵⁷ “You should take the route to the Hellugnupsskard pass and then down to Bardardal. They are suffering from famine there, but there is a great run of whale to the north around Tjornes. And since you resemble no one quite so much as the men who come from the west from Halfdanartungur, you should say that you come from there. . .

whale stranded in *Eyrbyggja saga* during a harsh famine and two groups of farmers neared a conflict over the rights to butcher the whale, one farmer offered to sell meat to the latecomer:

Ospak made straight for the whale and asked who was in charge. Thorir said he was looking after Sturla's share and Alf was seeing to his share and Snorri the Priest's. 'The other farmers are taking care of their own shares,' he added. Ospak asked how much of the whale they were going to let him have. 'You'll get nothing of what I'm responsible for,' said Thorir, 'but I can't speak for the other farmers. They may be willing to sell you theirs. How much do you want to pay for it?'⁵⁸

Ospak, however, reported that he was not in the habit of purchasing whale and proceeded to steal the cut and uncut portions. Such crimes were apparently all too common. When Thorvald of *Hrafn Sveinbjarnarson saga* heard of a great rorqual stranded on the land of Ragnheid, instead of selling him meat, Ragnheid proposed a swap: "When Thorvald heard of [the whale] he went to Selárdal and asked Ragnheid if she would sell him some hundredweights of whalemeat. Ragnheid let him have twelve hundredweights and said he could let her have an equal amount when a whale came ashore on his land. Thorvald never repaid her for this whalemeat."⁵⁹ Theft of course led to later retribution as whales became the catalysts for action.

Whales were of their ultimate importance at times of need, when communities exhausted all other recourse to survival. *Landnám* was a transitional period when scavenged resources were especially needed for survival, but any period of famine or harsh weather could produce the same important need.⁶⁰ But whale should not be thought of as simply famine food. Whales were also ideal resources, a great bounty

'My name is Thorhall... I live to the west in Halfdanartungur and am on my way to purchase whale meat.' in "Saga of the People of Ljosavatn," in *The Complete Sagas of Icelanders*, Vol. IV, ed. V. Hreinnsson, trans. T. Andersson and W. I. Miller (Reykjavik: Leifur Eiríksson Publishing, 1997), 225.

⁵⁸ *Eyrbyggja Saga*, trans. H. Pálsson and P. Edwards (New York: Penguin Books USA, Inc., 1989), 146.

⁵⁹ *The Saga of Hrafn Sveinbjarnarson*, trans. A. Tjomsland, *Islandica XXXV* (Ithaca, NY: Cornell University Press, 1951), 32. Not a Family saga, but included in manuscripts of *Biskupasögur* and in an edition of *Sturlunga saga*.

⁶⁰ Whale served the same purpose as a famine food in many modern communities, particularly Europe and Asia after World War II, when both Britain and Japan returned to or resorted to whale consumption. Despite many Japanese claims to the contrary, whale only became a popular food choice in the economic desperation after World War II.

delivered up as gifts of the sea, stranded upon the shore and ready to be consumed. They represent the symbolic plenty found in new lands or settlements. *Laxdaela saga*, which records the flight made by Ketil Flat-Nose's sons from Norway to Iceland, describes their new home as having plenty of beached whales and good fishing every season: "Bjorn and Helgi...heard tempting reports of it; they said that there was excellent land there to be had for the taking, with an abundance of stranded whales and plenty of salmon, and good fishing-grounds all the year round."⁶¹ *Egils saga* provides the perfect example of whale use in the context of ecologically-strategic *landnám*. When Skallagrim fled Norway for settlement in Iceland, his travels brought him to Borg and the district Borgarfjord. Skallagrim and his men exploited Borgarfjord to the fullest:

Skallagrim was an industrious man. He always kept many men with him and gathered all the resources that were available for subsistence, since at first they had little in the way of livestock to support such a large number of people. Such livestock as there was grazed free in the woodland all year round... He had a farmstead built on Alftanes and ran another farm there, and rowed out from it to catch fish and cull seals and gather eggs, all of which were there in great abundance. There was plenty of driftwood to take back to his farm. Whales beached there, too, in great numbers, and there was wildlife there for the taking at this hunting post; animals were not used to man and would never flee. He owned a third farm by the sea on the western part of Myrar. This was an even better place to gather driftwood, and he planted crops there and named it Akrar (Fields). There were islands offshore called Hvalseyjar (Whale Islands), because whales congregated there. Skallagrim also sent his men upriver to catch salmon. He put Odd the Hermit by Gljufura to take care of his salmon fishery there....⁶²

Skallagrim made use of all that Iceland has to offer, from woodlands, farmlands and mountains to heath, valley and coast. Skallagrim's ownership of these various lands also included driftage and salvage rights, essential to survival and subsistence in Iceland. Obtained by ownership, rent or common claim, these rights allowed salvage of fish, marine mammals, driftwood and a host of other items washed ashore. Skallagrim's men actively used the whole landscape and noted the loca-

⁶¹ "Saga of the People of Laxardal," in *The Complete Sagas of Icelanders*, Vol. V. ed. V. Hreinsson, trans. K. Kunz (Reykjavík: Leifur Eiríksson Publishing, 1997), 2.

⁶² "Egil's Saga," in *The Complete Sagas of Icelanders*, Vol. I, ed. V. Hreinsson, trans. B. Scudder (Reykjavík: Leifur Eiríksson Publishing, 1997), 67.

tions frequented by whales, both dead and alive. These scenes are, of course, ideals, as well as nostalgic representations of the good old days, when resources were more plentiful.⁶³ Whales and fish represented the renewable resources of endless potential that unsettled lands could offer, as well as a utopian view of virgin territory. As seen in the introduction to this chapter, Vinland was the preeminent exotic and virgin locale of the northern world, where the land offered up unique and bountiful products. The Norse settlers, as will be recalled, enjoyed these new pleasures but ensured their survival by using the ample resources of a stranded whale.

The whale stranding in *Grænlandinga saga* not only recounted the fortune of the new settlers, but it represented the idealized bounty of resources found in idyllic Vinland. The second account of the settlement of Vinland, found in *Eiríks saga*, presents a somewhat different portrait of whale acquisition, reminiscent of the more fantastic accounts of whales found in other sources. Both of the Vinland whale references occur in the chapters recounting Karlsefni's trip to North America. In *Grænlandinga saga*, written in the late twelfth century, the acquisition of a whale was the result of a stranding. But *Eirík's saga*, which is based on *Grænlandinga saga*, tells a different story of the acquisition of the whale. Written approximately half a century after *Grænlandinga saga*, *Eirík's saga* is distinguished from its predecessor by its Christian overtones. This saga's author wished to emphasize the settlers' spiritual voyage as much as their physical voyage. In this version, the Vinland settlers faced a harsh winter which tested their mettle in many ways:

They stayed there that winter, which turned out to be a very severe one; they had made no provision for it during the summer, and now they ran short of food and the hunting failed. They moved out to the island (Straum Island) in hope of finding game, or stranded whales, but there was little food to be found there, . . . Meanwhile Thorhall the Hunter disappeared and they went out to search for him. They searched for three days; and on the fourth day Karlsefni and Bjarni found him on top of a cliff. He was staring up at the sky with eyes and mouth and nostrils agape, scratching himself and pinching himself and mumbling. They asked him what he was doing there; he replied that it was no concern of theirs . . .

A little later a whale was washed up and they rushed to cut it up. No one recognized what kind of a whale it was, not even Karlsefni, who was

⁶³ O. Vésteinsson, T. McGovern, and C. Keller, "Enduring Impacts: Social and Environmental Aspects of Viking Age Settlement in Iceland and Greenland," *Archaeologia Islandica* 2 (2002): 103.

an expert on whales. The cooks boiled the meat, but when it was eaten it made them all ill.... Then Thorhall the Hunter walked over and said, "Has not Redbeard [Thor] turned out to be more successful than your Christ? This was my reward for the poem I composed in honor of my patron, Thor; he has seldom failed me." When the others realized this they refused to use the whalemeat and threw it over a cliff, and committed themselves to God's mercy.⁶⁴

This depiction of the whale as an associate of the pagan past is reminiscent of the pan-European traditions which showed whales as representatives of malevolence. The whale of *Eirík's saga* was not even a recognizable species, insinuating that this was in fact a mysterious monstrous whale, unknown even to the resident whale expert Karlsefni. With the exception of this monstrous whale, no other whale in the sagas is turned away as inappropriate or distasteful for resources. In fact, men tend to fight over whales rather than discard them.



Whales typify plenty, as they are the ultimate resource in times of hardship, so it is not surprising that whales would be the subject of great competition. This is why the location of stranded whales was such a concern in both the sagas and the laws. Whales in the sagas frequently stranded on territory that was shared or common rather than land clearly possessed by one legal owner. This created one of the preeminent themes surrounding whales in the sagas: the disputed drift whale. The primary function of the stranded whale was to create heightened drama within the sagas.

The sagas tell stories that fall into a rather simply schematized general pattern. After an introduction of the main characters in their geographical and historical settings, the saga tells of a conflict that rises out of what are usually the events of everyday life in Iceland. Conflicts grow out of marriages, divorces, inheritances, sporting events, horse fights, robberies, the destruction of property, thoughtless words, frustrated loves and jealousy, taunting and goading, disputed fishing rights, even rights to beached whales. The conflict may begin with the action of a rash or overbearing

⁶⁴ *Vinland Sagas: Grœlendinga Saga and Eirík's Saga*, ed. and trans. Magnus Magnusson and Hermann Pálsson (New York: Penguin Books, 1965), 96.

person, but then it grows until it reaches a climax, sometimes quite terrible and bloody, and producing a countering act of vengeance.⁶⁵

The large individual rorqual, seen in so many of the sagas, is a literary ideal, a great resource in time of need that prompted legal debate and physical challenge.

Of the major themes which characterize whale use in the sagas, the depiction of a violent dispute over the ownership of whale carcasses is by far the most common. Fights and feuds in the sagas could start for any number of reasons, including stolen cattle, personal injury or affront or stolen whales. Whales were among the trickiest of debated resources, though, for they often stranded on marginal land over which one man or several could own driftage rights. They were divided according to well-known legal precepts, but the division, like most in Iceland, depended upon mutual consensus or upon legal judgment.⁶⁶ "The sagas suggest the dispute-processing mode of first choice was violent self-help. Of the 520 cases counted by Heusler in the family sagas, 297 led to vengeance, 104 to arbitration without prior recourse to law, and 119 to lawsuits."⁶⁷ In a majority of these whale episodes, a battle immediately resulted over the ownership of the stranded whale, occasionally followed by the invocation of law to resolve the conflict. Great whales, rather than small cetaceans, are always the object of conflict in the sagas. If the authors had written of small stranded whales, laws would not be invoked since small whales were not subject to the same legal complexity as large whales. Ultimately, the stake in these battles was not simply resources. Honor and control were the real prizes in these encounters. In most of these stranding episodes, one man's rights were

⁶⁵ R. Kellogg, "Introduction," in *The Complete Sagas of Icelanders*, Vol. I, ed. V. Hreinsón (Reykjavík: Leifur Eiríksson Publishing, 1997), xlv.

⁶⁶ Andersson and Miller describe the major forms of settlement dispute found in the sagas: adjudication, or third party settlement independent of the parties' wishes; arbitration, third party settlement with binding decision; mediation, third party participation and suggestion without binding decision; negotiation between conflicting parties; violence or coercion, which could include "vengeance killing, sheep-raiding, or bullying; avoidance, or simple cessation of contact; and lastly what they term 'lumping it'—"parties still maintain relations, but the aggrieved party chooses to ignore his grievance" (23–24).

⁶⁷ The statistics then reveal that the lawsuits resulted in "fifty . . . resolved by adjudication, sixty ended up in arbitration, and the remaining nine were inconclusive, usually because of violent disruption of the court" (Andersson and Miller, 25).

openly infringed upon by another, and honor as much as food was the real quarry to be won.⁶⁸

While many of the sagas refer to the legal ramifications of the theft of whale products, few sagas actually depict the involvement of any legal figure who presided over the struggle, either at the stranding site or at a thing.⁶⁹ One of the most unique whale theft episodes occurs in the saga of Hrafn Sveinbjarnarson, medieval Iceland's preeminent physician.⁷⁰ The saga is unusual in its detail and historical value, written by a contemporary who apparently knew the events surrounding the life of Hrafn and his enduring feud with Thorvald Snorrason. The author recounted the events that transpired between these two men, but also the involvement of their allies and other great bishops and chieftains of twelfth and thirteenth century Iceland. The historical value of this saga is great and the stranded whale episode found here is unlike that seen in any other. Whereas the stranding episodes in most sagas result in wars of words or overt theft, Hrafn's approach is different.

Chapter sixteen of *Hrafns saga* recounts the stranding of a whale at Strandir. When Thorvald is told of the stranding, he instructs the finder to secure ownership of the whale, saying that it had washed ashore on public land, even though it clearly had stranded on Hrafn's land. The enmity between Hrafn and Thorvald was well-established at this point in the saga, so one might expect Hrafn, upon hearing of this crime, to retaliate in a manner typical of the sagas, namely raid and battle. Hrafn is described by the saga's author as "highly accomplished," a master smith, poet, and "a learned man who had studied for the priesthood as far as receiving the tonsure. He was well versed in law, a good speaker, had a good memory, and was well informed in history."⁷¹ Hrafn knew better than to engage with a man like Thorvald, so instead he resorted fully to the law.

⁶⁸ Legal and physical battle over stranded whales is found in numerous sagas, including *Grettis saga*, *Hávarðar saga Ísfirðings*, *Fóstbræðra saga*, *Bárðar saga Snæfellsáss*, *Eyrbyggja saga*, *Víga-Glúms saga*, *Gold-Thorir*, *Reyklaela saga*, and *Gríms saga Lodinkinna*. Each of these nine sagas contains substantial passages describing conflict over whale driftage rights or simply over proper division of common-land stranded whales.

⁶⁹ *Grettis saga* sees resolution of the whale theft at Althing, and legal advice is sought, often to no end, in *Fóstbræðra saga*, *Reyklaela saga*, and *Hávarðar saga Ísfirðings*.

⁷⁰ Although not a family saga, this tale and its whale episodes is included here for its general similarity to other family saga whale stories.

⁷¹ *The Saga of Hrafn Sveinbjarnarson*, 3–4.

When Hrafn heard of this [theft] he sent men south to Hall the law-speaker, his brother-in-law, and to Thorvald, Hall's brother, to ask their advice as to how he should get redress from Thorvald. They advised that Hrafn should bring action against Thorvald and the men who had taken the whale and that he should present the case against them at the Dýrafjord Thing and there prosecute them according to law". The next summer Hrafn brought suit for the whale theft against Thorvald and all the men who had been at the cutting of the whale and had received benefit from it". At this Thing Thorvald and nine other men who had assisted in the whale theft were convicted.⁷²

The case did not end there, though. The following summer, Thorvald's crime was announced at the Althing, and Hrafn traveled to Thorvald's district to collect the financial penalties owed to him from the theft. *Hrafn's saga* is exceptional in that the stranded whale theft was resolved without physical violence and the law gave full recourse to Hrafn. Unfortunately, Thorvald's prosecution was not without retaliation, for he invaded Hrafn's farm and a great battle was only narrowly avoided.

Hrafn's saga is unusual in the wronged party's legal prosecution of the thief. When laws are usually evoked, arbitration or third-party decisions are more common. Most common, though, is an eruption of warfare over the quarry long before any lawman could be consulted. *Víga-Glums saga* tells of Klæng, who knowledgeably cites the law when a dead whale is towed away by an unjust claimant, but his protestations are ignored: "Klæng said it was against the law to move [the whale] anywhere except to the nearest land belonging to one of those [claimants] involved. Thorvald said that he was justified and declared that Glum's kinsmen needn't encroach on his rights—and whatever the law says, the stronger side are going to have their way this time'."⁷³ *Hávarðar saga Ísfrðings* also reveals the tension between might and right when a rorqual strands on land with shared driftage rights.

The next thing to be told is that a whale was stranded in Isafjord. Thorbjorn and Havard had drift rights on both sides. The first report was that the whale belonged to Havard. It was a splendid finback whale. Both went there and decided to accept the lawspeaker's verdict. A lot of people were assembled. It seemed clear to everyone that the whale belonged to Havard. Thorkel the lawspeaker arrived. He was then asked to whom the whale belonged. Thorkel answered, rather faintly, "the whale belongs to them,

⁷² *The Saga of Hrafn Sveinbjarnarson*, 43.

⁷³ *Víga-Glums Saga*, trans. J. McKinnell (Edinburgh: Canongate Publishing Ltd., 1987), 27, 125.

of course,” he said. Thorbjorn then walked up to him with drawn sword and spoke: “Who is them, you simpleton?” he said. Thorkel answered immediately, and lowered his head, “You, you, of course,” he said. Then Thorbjorn proceeded in his overbearing way to claim the entire whale. Havard then went home very dissatisfied. Everyone thought that Thorbjorn had once again acted unjustly and dishonourably.⁷⁴

While not citing any specific law, here Thorkel uses his knowledge as a lawspeaker to render a just verdict, yet in both of these sagas, the man with lesser claim upon the whale succeeded in unlawful and blatant theft. Many bystanders witnessed the theft, yet did not retaliate or come to the aid of the rightful owner.

While these episodes may serve the purpose of the authors, building dramatic tension around the unrequited crime, another saga offers a simpler explanation for the lack of action after a whale theft. When an unnamed father and sons in *Reykdaela saga* suffer the theft of their rightly-owned whale to Vemund, a kinsmen suggests that they should let the theft pass without retaliation and not “quarrel over some whale blubber.”⁷⁵ In short, these thefts take place without retribution because of the fear of starting an even greater feud. The physically stronger side frequently flouted the law and succeeded in claiming the whale. The frequency of these episodes seems to indicate a widespread social acceptance that this crime was more acceptable than starting a much more dangerous and potentially all-encompassing feud.

When recourse to the law failed or when the law simply was disobeyed, the ownership of a stranded whale was settled by violent means. *Fostbræðra saga* depicts what seems to be a reasonable resolution over a stranded whale:

Thorgils...had gone to the Strands with his crew and had begun to cut up a whale which had drifted on the common lands there”. Thorgeir had had no luck in catching anything where he had gone, neither whales nor anything else. Then he learned that Thorgils was flensing a whale at another spot. So he and Thormód went to that place, and when they got there Thorgeir said: ‘You have done a good job, cutting up this whale, and now it would be fair to let others besides yourselves have a chance

⁷⁴ “Saga of Havard of Isafjord,” in *The Complete Sagas of Icelanders*, Vol. V, ed. V. Hreinsson, trans. F. Heinemann (Reykjavik: Leifur Eiriksson Publishing, 1997), 317.

⁷⁵ “Saga of the People of Reykjadal and of Killer-Skuta,” in *The Complete Sagas of Icelanders*, Vol. IV, ed. V. Hreinsson, trans. G. Clark (Reykjavik: Leifur Eiriksson Publishing, 1997), 267.

to take advantage of this good thing; because all have equal rights here.' Thorgils answered: 'Well spoken! Let each keep what he has cut off.'⁷⁶

With a happy resolution almost reached, Thorgeir then insisted that Thorgils abandon the whale, at which point the pleasant tone of discussion changed: "I haven't the least desire to leave the whale, nor do we propose to part with what we have cut off him, at least as long as we can hold on to him."⁷⁷ A battle ensued and Thorgeir claimed the entirety of the whale, including the portion already flensed and butchered by Thorgils.

The depictions of stranded whales and the battles over them provide an excellent example of the act of *rán*, an unlawful act of "open, hostile taking" of goods or an unsociable means of transferring of goods from one person to another.⁷⁸ William Ian Miller, in *Bloodtaking and Peacemaking*, frames his discussion of this category of semi-theft in an excerpt from *Eyrbyggja saga* in which the plunderer Óspak openly appropriated goods which clearly did not belong to him.⁷⁹ While Miller cites a situation of theft of goods, Óspak also steals a whale in a later chapter of this saga. Miller's description of *rán*, in reference to Óspak's open thievery, fits well the cases of whale theft which recur throughout the sagas. Rather than a hidden theft, *rán* was an open, outright taking of property, as was clearly the case with these stolen whales. Miller describes many situations which could provoke *rán*:

...[*Rán*] is a direct response to a refusal to sell or give and is geared, initially at least, to the acquisition of specific goods....*Rán* was also undertaken as a way of provisioning forces assembled for battle. Sometimes compensation was awarded for these expropriations pursuant to a settlement between the principals,...but often farmers had to endure these depredations, even if not so quietly....Elsewhere, *rán* figures primarily as an act of vengeance or self-help, a tactical maneuver, in a dispute already clearly defined....In many instances the goal is less the acquisition of specific goods than the infliction of damage, material or psychological, on

⁷⁶ *The Sagas of Kormák and The Sworn Brothers*, trans. L. M. Hollander (New York: American-Scandinavian Foundation, 1949), 104.

⁷⁷ *The Sagas of Kormák and The Sworn Brothers*, 104.

⁷⁸ W. Miller, "Gift, Sale, Payment, Raid: Case Studies in the Negotiation and Classification of Exchange in Medieval Iceland," *Speculum* 61, no. 1 (1986): 18. Miller's study of the social and economic factors surrounding exchange in medieval Iceland includes a discussion of *rán*.

⁷⁹ Miller, 1986, 18, n. 4; *Eyrbyggja saga* is a natural choice for legal study, for this saga, which Andersson and Miller describe as a "frequently cited...source for Saga Age legal practice...." Andersson and Miller, 4.

one's adversary. These takings invariably end up being paid for in some way, either by reprisal or an arbitrated compensation award.⁸⁰

Since the taking of goods was not concealed in the act of *rán*, it generally was not considered thievery.⁸¹ Certain acts of *rán* could be considered thievery, punishable by outlawry, although according to Miller, punishment or revenge for *rán* could be avoided "...by the willingness to leave behind a consideration," or through an indication of the possibility of reciprocity.⁸² In several of the whale theft scenes, the plunderer offered the rightful owner a small share of the whale. Thorgeir in *Hávarðar saga Ísfrðings* suggested that Thorgils keep what he had cut and allow others their share of the whale, before Thorgeir ultimately claimed the whole whale. Since the theft of stranded whales in most of the sagas occurred before witnesses, usually other claimants or rightful owners or even lawmen, these acts appear to be cases of *rán*. Scandinavian laws reaffirm the common medieval notion that covert theft was a more grievous crime than overt theft. In the property laws of the *Gulathing* code, the fine for night theft was more than twice that of day thievery.⁸³ Thieves in the night are unidentifiable and secretive with no perceivable claim to the whale or other property. Those that engaged with the whale flensers by day argued their case and directly claimed what they contended to be legally theirs.

The use of stranded whales in the sagas was a savvy authorial choice. If these whales had been hunted, there would be little reason to invoke the laws, since hunting laws were straightforward. The laws relevant to strandings were phenomenally complex, potentially as confusing to medieval Scandinavians as they are to us, which might explain all the conflict over whales. The sagas' authors chose to depict stranded whales in order to create a fictional scene which was ripe for legal ambiguity. These scenes are too formulaic to be construed as actual report, and while similar events surrounding stranded whales no doubt actually occurred, the inclusion of these scenes within the sagas simply provides the saga authors with the perfect excuse to write about Norse literary favorites, namely great men, feuds, and laws. The frequency and preeminence of these scavenging scenes may have led

⁸⁰ Miller, 1986, 39–40, n. 84.

⁸¹ Miller, 1986, 18.

⁸² Miller, 1986, 39.

⁸³ *The Earliest Norwegian Laws; Being the Gulathing Law and the Frostathing Law*, trans. L. M. Larson (New York: Columbia University Press, 1935), 150.

historians familiar with the sagas, but not the legal evidence, astray in the assumption that scavenging rather than hunting was the sole concern of medieval Scandinavians. A survey of Norse laws reveals a great deal more complexity with respect to stranding and hunting. A stranded whale could have been the product of a hunting expedition, as shot whales frequently became stranded and scavenged whales. The laws reveal that the simplicity of the sagas' depiction of whale stranding shows only half the process of whale acquisition.

CHAPTER EIGHT



HIDDEN HARPOONS AND POACHED WHALES: MUNDANE FISHES IN NORTH ATLANTIC LAWS

The Icelandic sagas and laws are inexorably bound in their depictions of whale strandings. The sagas' scavengers cite the laws religiously until, of course, might trumps right. The laws sought to prevent what the sagas so lovingly languished in, the violence that inevitably ensued over contested whales. Medieval whaling laws were nowhere more detailed than in Iceland and Norway. Most medieval royal laws found across Europe never dealt with struggles over whale ownership since most whales were simply claimed and parceled out by monarchs. Iceland, of course, was not burdened by royal overlordship until the thirteenth century, and even then kings often deferred from claiming whales in recognition of their necessity to local populations. The laws to be surveyed here, including the earliest Norwegian laws of *Gulathing* and *Frostathing*, the fragmentary Faroese laws known as the *Seyðabrævið*, or 'Sheep Letter,' and the Icelandic laws called the *Grágás*, or 'Grey Goose,' include legislation on drift whales, stranded whales and hunted whales. There was no neat delineation of categories within whaling law, since drift whales became stranded whales, hunted whales became drift whales and drift whales could strand, then drift again. The complexity of whaling laws was based both on complicated terminologies and uncertain situations, as so vividly illustrated in the sagas.

The laws of the North Atlantic world originated in the Norwegian regional laws which survive in several codes, including the Western

Norwegian *Gulathing* and the Trøndelag district *Frostathing* code. These two codes were combined with royal and church law by the eleventh and twelfth centuries, when several Norwegian monarchs left their mark upon the laws, most notably St. Ólafr (r.1015–1028) and Magnús Erlingsson (r.1161–1184). Historians note the existence of two texts within the laws, one from each of these reforming kings. It was King Magnus Hakonarson, known as Lagabœtir or ‘law-mender’ who revised the national law in its most comprehensive redaction in 1275. His code was imposed not only in all of Norway’s districts, with some local modifications, but also in those North Atlantic territories which were subject to the Norwegian crown. The first lawcodes of the North Atlantic, though, were singularly influenced by the original *Gulathing* tradition, which traveled with Norse settlers to Orkney, Shetland, the Faroes, Iceland, and likely the Greenland settlement. *Gulathing* was modified to fit local conditions, so the end result for historians is a host of similar law-codes with regional variation and amendments based on local needs and nascent local traditions.

Some of these regional lawcodes have survived the Middle Ages, while others were lost or replaced by the laws of new overlords. Orkney and Shetland, for example, were important medieval centers of power within the Norse North Atlantic. The *Gulathing* law and its later revisions served as the law of Orkney and Shetland through the Middle Ages.¹ The Norse character of Orkney and Shetland, and the Norse laws which were followed on those islands, persisted well after they were transferred from the control of Denmark to the Scottish crown in 1468–1469. These island groups “...continued to adhere to a system of law which was firmly rooted in the Norwegian and enabled the inhabitants on occasion to appeal to Bergen for confirmation of decrees.”² Finally, the Stewart Earls, in an effort to subjugate Orkney, destroyed indigenous law codes in the sixteenth century and subsequently Scots law was implemented by the crown.³

¹ W. Thomson, *History of Orkney* (Edinburgh: Mercat Press, 1987), 89, 108; J. Ryder, “Udal law: an introduction,” *Northern Studies* 25 (1988) 1–3; M. R. H. Jones, “Perceptions of Udal Law in Orkney and Shetland,” in *Shetland’s Northern Links: Language and History*, ed. Doreen J. Waugh, 186–204 (Edinburgh: Scottish Society for Northern Studies, 1996).

² Ryder, 4.

³ Thomson, 156–157; The laws of pre-Stewart Orkney have never been recovered.

Gulathing also served as the basis of law in the Faroes, where Norwegian code was modified and enforced by chieftains at the local things. Variations to Norwegian law emerged when King Magnus Lagabœtir agreed, after introducing his revisions to the original *Gulathing*, that local laws for farming and household subsistence should be maintained in the Faroes and amended to his new laws. These local laws were attached as a rider to the *Gulathing* revisions by 1298 and were known as the ‘Sheep Letter,’ or *Seyðabrevið*. Given the ecological challenges of life in the Faroes, household laws dealt not only with domesticates and agricultural resources, but also the goods that could be scavenged on land and shore. The *Seyðabrevið*, as a result, reflects the Faroes’ unique ecology and needs, and contains whaling laws not found in the *Gulathing* or elsewhere in the North Atlantic laws.

The laws, though, were nowhere more organized and adored than in Iceland, united as a “community of laws” in the absence of royal authority.⁴ Like Orkney, Shetland and the Faroes, Iceland was subject to an early form of *Gulathing* law. Following the foundation of the Commonwealth in 930, the *Gulathing* laws were locally modified and became the *Úlfjótslóg*, the first law of Iceland. According to *Íslendingabók*, by 1117, a new law required that yet another new code be committed to writing, and the *Haflíðaskrá* code, named after the current lawspeaker, was the result. Much of *Haflíðaskrá*, a written record of the annual pronouncement of the lawspeaker, is now lost but is thought to be preserved in the *Grágás*.

Grágás, named ‘Grey Goose’ from the manuscript in which they were collected, is not a unified set of laws. Rather it is a twelfth or thirteenth century collection of legal materials found in two thirteenth century manuscripts, the *Konungsbók* and *Staðarhólsbók*.⁵ *Grágás*, our earliest extant source for the established laws of Iceland, focuses on the rights of landowners and landholders, the free classes of Iceland. The idea

⁴ M. Stefánsson, “The Norse island communities of the Western Ocean,” in *The Cambridge History of Scandinavia*, ed. K. Helle, 214 (Cambridge: Cambridge University Press, 2003).

⁵ The two manuscripts differ in “contents, arrangements and formulations” (Stefánsson, 214). Byock notes that *Konungsbók* is the more important manuscript, as it contains numerous sections not found in *Staðarhólsbók*. Furthermore, it is important to note that neither of these manuscripts is “an official codex” both were extremely expensive to produce, and were essentially private law books. J. Byock, *Viking Age Iceland* (New York: Penguin Putnam Inc., 2001), 309.

that medieval Iceland existed as a ‘community of laws’ comes from the fact that the laws of Iceland, as in *Grágás*, are customary laws that were willingly obeyed, enforced and practiced by Icelanders. “*Grágás* was not a set code that everyone was expected to obey, but a group of rules that individuals could use to their advantage or turn to the disadvantage of others. The sagas show characters routinely breaking the law when they thought they could get away with it, and it may well be that people acted in this way.”⁶ The *Grágás*, furthermore, are the “largest of the Scandinavian provincial lawbooks,” whose style has been called “sober and straightforward, ... [which] may simply reflect the original oral character of the laws.”⁷ The whaling laws in *Grágás* occur in the Land-claims section, which includes legislation on virtually all land and coastal resources, woodlands, pasture, irrigation and water rights, arable and animal resources.

The *Grágás* served as the laws of the land until the thirteenth century, when Iceland became subject to Norway and an interim set of laws known as the *Jarnsīða* was created. By the late thirteenth century, lawspeaker Jón Einarsson brought the last set of revised laws of Norway, known as *Jónsbók*. *Jónsbók*, half the size of the substantial *Grágás*, was more sensitive to Icelandic conditions than the transitional *Jarnsīða* which was mainly Norwegian law. The revised *Jónsbók* included some materials from *Grágás*, thus producing the code that would carry Iceland from the Middle Ages into the eighteenth century.⁸

The Norse *Gulathing*, *Frostathing* and *Lagabætir* revisions, the Faroese *Seyðabrévið* and Icelandic *Grágás* and *Jónsbók* all contain detailed rules for whale acquisition, ownership and division. *Gulathing*, the earliest code, contains far fewer and less complex whaling laws compared to the later Icelandic laws, which may reflect different constraints upon whalers in the new environment of Iceland. Submarine geography and marine ecology of the waters around Iceland may have required new and different approaches to whaling. *Gulathing* law includes two chapters on whaling and blubber shares in the Miscellaneous Provisions section, while *Frostathing* contains only one set of whaling laws in the Tenancy and Theft section. *Grágás*, in contrast, devotes the greatest attention of any Scandinavian medieval code to whaling laws with five full chapters

⁶ Byock, 2001, 308–309.

⁷ Byock, 2001, 314.

⁸ H. Fix, “*Jónsbók*,” and “Laws: Iceland,” in *Medieval Scandinavia*, ed. P. Pulsiano, 346–347, 384–385 (New York: Garland Publishing, 1993).

on whales found in the Land-claims section. The Icelandic code had far more technicalities surrounding private land ownership and whale scavenging than were found in Norway. The Norwegian laws, it must be noted, all claim portions of whales for the king, usually when the stranded whale was very large or when it stranded on common shoreline.⁹ This may have had more to do with allaying warfare over whales than with the desires of the king for the right to whale products.

According to most laws, the basic process by which whales were acquired could include active hunting of whales at sea though spearing or driving, the scavenging of drift whales, either dead, dying, or floating at sea and the scavenging of stranded whales which had washed ashore on common or private land. Once the whale was found, it had to be claimed with legal right and then butchered and transported. But the laws reveal subtle nuances with respect to how whales came ashore. Stranded whales could have been hunted whales that either swam away from the hunters and died later or broke from their lashings if attached to a boat. Hunting and scavenging are seemingly two separate activities to modern sensibilities, yet they frequently and necessarily interconnected in medieval whaling, especially when the whales reached the shoreline.

Whale hunting is addressed in a rudimentary way in most medieval Scandinavian laws. Both *Gulathing* and *Grágás* provide insight into several methods of whale hunting, although the manner of killing the whale merits less discussion than the means of securing the whale. The *Gulathing* states: "A man may hunt whales wherever he can. If a man is chasing a whale and kills it out on the deep, the whale is his whether it be large or small."¹⁰ *Grágás* hunting law likewise is straightforward, albeit deceptively so. Hunt in common waters, beyond a particular tidal boundary and the whale is yours: "All men have the right to catch outside the netlaying line without incurring penalty, and the outermost netlaying line is where at low tide a seal-net touches bottom at a depth

⁹ *The Earliest Norwegian Laws, Being the Gulathing Law and the Frostathing Law*, trans. L. M. Larson (New York: Columbia University Press, 1935), 126. Medieval Danish law, *Den fryske Lov*, 1241, observes laws similar to those of England, although the king's portion is not any specified part of the whale. U. Schnall, "Medieval Scandinavian Laws as Sources for the History of Whaling," in *Whaling and History Perspectives on the Evolution of the Industry*, eds. Bjørn L. Basberg, Jan Erik Ringstad, and Einar Wexelsen, 14 (Sandefjord: Kommandor Chr. Christensens, 1995).

¹⁰ *The Earliest Norwegian Laws*, 126.

of twenty meshes [approximately 120"] with the floats on the surface"¹¹ The manner of whale hunting is not explained in much greater detail or depth than these basic pronouncements. In short, spear a whale in common waters and it is yours. Whale drives also are mentioned in the law codes of Norway, Iceland and the Faroes: "If men drive whales ashore, two-thirds belong to them and one-third to the landowner."¹² *Gulathing* and the Magnus Lagabœtir revisions both state that there were specified whale bays into which one could drive whales, although if the bay was owned by someone other than the hunter, the hunter had to pay a trespass fine. But, as stated with respect to *Grágás* law, these simple pronouncements are deceptively straightforward. Killing a whale at sea or driving whales ashore may be a first step, but neither guarantees legal right to the quarry. Even if the whale was killed by the hunters, it must be secured, towed and deposited on land owned by the hunter, all complex problems without simple solutions in the Middle Ages. While complexities abound, it is clear nonetheless that whales legally could be driven ashore or hunted at sea with spears or other weapons, termed shots or harpoons in the laws.

The laws indicate that whaling was both individual and cooperative, as many men were involved in the pursuit and spearing of whales, but individuals could be singled out for hunting prowess and reward. Unfortunately, Icelandic literature and history celebrate great warriors, great poets, great Christians, but no great whalers. No Ketil Whale-Killer or Thorfinn Harpooner grace the pages of the Icelandic or Norse corpus. Sagas and other sources occasionally mention men with whale-related nicknames. *Landnámabok*, for example, offers Ormolf the Fish-Driver and the memorable Bjorn Whale-Belly.¹³ While no prominent 'whalers' are found in the historical corpus, whale experts are known. Karlsefni of the Vinland voyages was described in *Eirík's saga* as a whale expert,

¹¹ *Laws of Early Iceland: Grágás: The Codex Regius of Grágás with Material from Other Manuscripts. Vol. II*, trans. Andrew Dennis, Peter Foote and Richard Perkins (Winnipeg, Canada: University of Manitoba Press, 2000), K212, p. 142.

¹² *The Earliest Norwegian Laws*, 127; *Laws of Early Iceland: Grágás*, 217; *Gulathing* notes that "If a man shoots at a whale and hits [it] and drives [it] up on the shore, one-half of the whale belongs to him who chased it, and one-half to him who owns the land. The Sheep letter: "Now men drive a whale ashore, kill it and get it safe above high water mark, but do not themselves own the land above the shore; they are to have a quarter share;" J. H. W. Poulsen and Ulf Zachariasen eds., *Seyðabrévið* (Tórshavn: Føroya fróðskaparfelag, 1971).

¹³ *The Book of Settlement: Landnámabok*, trans. H. Pálsson and P. Edwards (Manitoba: University of Manitoba Press, 1972), ch. 85, 111.

although his expertise was not defined either as particular knowledge or practical skills at whaling.¹⁴ To claim whale expertise was not just a point of honor, as this skill could lead to immense material benefit. The *Grágás* reveal the degree to which individuals could gain material reward or public prestige from whaling.¹⁵ When whales were shot, the killing shot, recognized by virtue of a unique personal mark placed upon all weapons, was sought out: “if more than one harpoon is in a whale, then the harpooner’s share is gained by the one [displayed] harpoon which was the cause of death...”¹⁶ The whaler’s share of a third to a half of the whale was determined by assessment of this killing shot. In the Icelandic culture of honor, we also must consider whether less tangible social rewards were also gained by the public announcement of the whaler’s killing shot. Prowess as a hunter may have led to other benefits, just as incompetence could lead to derision. We can also assume that those who were not skilled at spearing were revealed publicly as poor shots: “a harpoon that only pierces the blubber does a whale no harm at all.”¹⁷

While the skills of a good marksman were essential across the North Atlantic, the manner in which hunters approached, shot or drove whales varied widely from Norway to Iceland to the Faroes. Icelandic whaling law reveals the most complexities with respect to catching and using whales and Icelandic whaling clearly was a gamble. Hunters invested time, effort, tackle and personal risk in striking a whale, often repeatedly, a whale which they knew they would almost certainly lose because of their inability either to kill the whale outright or to secure it to a small boat. Their intent was injury, hopefully severe enough to cause imminent death so that the whale could be freely butchered at sea. Because loss

¹⁴ *Vinland Sagas: Grœlendinga Saga and Eirík’s Saga*, ed. and trans. Magnus Magnusson and Hermann Pálsson (New York: Penguin Books, 1965), 96.

¹⁵ O. Lindquist, “Whaling by Peasant Fishermen in Norway, Orkney, Shetland, the Faeroe Islands, Iceland and Norse Greenland: Medieval and Early Modern Whaling Methods and Inshore Legal Régimes,” in *Whaling and History Perspectives on the Evolution of the Industry*, eds. Bjørn L. Basberg, Jan Erik Ringstad, and Einar Wexelsen, 35 (Sandefjord: Kommandor Chr. Christensens, 1995).

¹⁶ *Laws of Early Iceland: Grágás*; K 215; 144–146.

¹⁷ *Laws of Early Iceland: Grágás*, S448, 329. In June 2007, news broke of an incredible find of just such a poor shot found in a 50-ton Bowhead whale. Alaskan hunters found a 3.5 inch projectile embedded under the whale’s blubber, a shot dating to circa 1890. The whale survived this shot, and presumably others, to live to 115 to 130 years of age. “This Whale’s Life... It Was a Long One,” *New York Times*, http://www.nytimes.com/2007/06/13/science/earth/13brfs-THISWHALE821_BRf.html?ref=science (accessed 13 June 2007).

of the whale was a reality for medieval Icelanders and perhaps most North Atlantic hunters, strategic provisions were made for the recovery of whales. Knowledge of currents and drift conditions, possessed by any fisherman who routinely worked the waters off Iceland or elsewhere in the North Atlantic, were essential and the simplest strategy to hope for recovery. The strategy of many North Atlantic whalers, as becomes apparent in the *Grágás*, was something akin to ‘shoot, drift, recover.’

This strategy was developed in response to Iceland’s geographical constraints. Such concerns about whale loss may have been less common in the more secure fjords of northern Iceland or Norway. Even in the Faroes, Orkney and Shetland, archipelagoes with numerous firths and inlets and more expansive coastal shelves, hunters could have better fortune in recapturing drift whales or directing whales towards shallows. But whalers in some regions of Iceland required different adaptations of strategy and law to the deep waters surrounding their island. As a result, the *Grágás* are much more comprehensive with respect to whale stranding than are the *Gulathing* laws. While we could attribute these differences to patterns of landholding or the absence of a king in Iceland, the real differences in the law codes seems best explained by ecological adaptation. Hunted whales could easily become drift whales, so drift whales became the essential focus of Icelandic law.

The location of drift or beached whales was the deciding factor of ownership in whale scavenging and property law. According to *Grágás*, drift whales were ideally found in the ‘deep water,’ which seems to correlate with the common waters beyond personal property and the foreshore. Any property obtained as drift, from whales to driftwood to goods from wrecked ships, was valuable, so much so that most monarchs across Europe took pains to legally claim ‘drift’ or, as known in medieval English law, ‘wreck.’ *Gulathing* law, first composed when the Norwegian kings were establishing their hegemony in Western Norway, includes such a proscription: “If a whale drifts up on the shore of the common, it belongs to the king; but if men cut it up, the one who steered the boat out to it shall owe a fine of forty marks, and the others who rowed the boat with him three marks each.”¹⁸ Men would be willing to pay such a fine if the whale were large enough to make a profit from the sale of meat or blubber.

¹⁸ *Earliest Norwegian Laws*, 150.

Drift whales at sea, even more than stranded whales, were a real boon for those who could find them in common waters.¹⁹ Drift whales offered none of the complications of stranded whales, which potentially could be divided among the finder, shooter, shore owner, renter and so forth. If a drift whale was found without any apparent shots or marks, it was free quarry, maritime roadkill, there for the taking. However, if a marked harpoon was found within the drift whale, the drift-finder might have to share his catch: "Now someone shoots a whale with a marked harpoon, and others find it in deep water, then it belongs half to him, who did the shot, if he has witnesses for this shot, and half to him, who saved the harpooned whale."²⁰ *Grágás* record a slightly different rule regarding marked shots on the open sea: "Even if men shoot assembly-displayed harpoons at whales in openings in ice, then they have no more right to them than anyone else. But if they drift dead to land, then theirs is the harpoon-share."²¹ In Iceland, ownership on the deep sea was, quite literally, fluid, whereas ownership on the land was rigorously defined. Several of the law codes give the impression that dead and drift whales were found regularly and were partially butchered at sea to avoid the pains of legal division upon land: "If man comes upon a whale out on a fishing ground, let him cut off what he can, only not through the walls [of the visceral cavity], and let the carcass drift."²² This butchering proscription was surely intended to prevent a punctured whale from sinking, so that it could still drift ashore and be used further.

¹⁹ We cannot forget the importance of drift and the religious overtones of items provided from the sea. God provided freely by the sea must have been viewed as gifts of Njord, god of seafaring, or, more powerfully, Thor, also seen as having dominion over sea journeys. The tradition of high seat pillars flung from immigrants' ships as they sighted Iceland was a religious act, a devotion to the sea and its gods, in whose hands the settlers left their fate: "As they neared the shores of the island, they flung the high-seat pillars overboard so that the god himself might guide them to land" (H. R. Ellis Davidson, *Gods and Myths of Northern Europe* (New York: Penguin Books, 1964), 78). High seat pillars set to drift by Ingólfr Arnarson, the first settler of Iceland, were not easily found. After three winters, his high seat pillars were finally located and Ingólfr ultimately settled at Reykjavík where the pillars had fortuitously washed ashore. High seat pillars "support[ed] or surround[ed] the seat reserved for the most important person in the household or building, [and]... were brought from the settler's home in Norway" (J. Jochens, "Late and Peaceful: Iceland's Conversion through Arbitration in 1000," *Speculum* 74 (1999): 628; *The Book of Settlement: Landnámabok*; ch. 8–9).

²⁰ Schnall, 13; excerpt from the *Magnus Lagabætir code*.

²¹ *Laws of Early Iceland: Grágás*; 217.

²² *Earliest Norwegian Laws*, 127; Schnall, 13, excerpt from the *Magnus Lagabætir code*.

Drift whales were the primary concern of the whaling laws in the Faroese *Seyðabrævið*. Two unique legal terms are found in the *Seyðabrævið* that occur nowhere else in Old Norse law: *hvalflyster*, or a “piece of whale that is floating in a bay”; and *vagnhog*, “that which one may freely gaff in bay.”²³ Like contemporary laws from Iceland and Norway, drift whales could be freely scavenged at sea according to the *Seyðabrævið*, but as soon as that whale reached the shore, it became subject to the complexities of the national or royal law and could become the king’s property. “. . . If a farmer’s servants (*húskallar*) find a whale out at sea and cut off sufficient to make a boatload, they are to have a seventh of it; but if they bring a whale ashore uncut, they are to have the amount stipulated by the National Law.”²⁴ Whole whales were not the only concerns of the industrious Faroese. Even *vagnhogg*, free drifting whales, whale bits, or ‘killer cuts’ as the *Seyðabrævið* translators describe them, demanded fair legislation. From the following quotation’s evocation of God, peace and prosperity, we can discern that these rotten resources, like all stranded bits of whale, were seen as the object of potential dissention, distasteful as they may sound,

We have also decided that those pieces of whale which we call ‘killer cuts’, or pieces which have been drifting for so long that they cannot be salted, are to be given to the person who owns the land where they drift ashore. This is for the sake of God and of our father and mother, to bring us peace and prosperity, and is to be done in the following way: it (the whale) is first to be shown to two witnesses, and they are to reach some decision about it—unless our successors feel that this is against the interests of the crown.²⁵

Drift whales in common waters clearly were the ideal across the North Atlantic, but classification of ‘common water,’ where scavenging was free, was not universal.

Common water or ‘the deep’ seems to be a straightforward idea, but the definition of where common waters began varied across the North Atlantic. More precisely, the definition of ‘foreshore’ varied dramatically.²⁶ Foreshore is broadly defined as the area of the shore

²³ Poulsen and Zachariasen eds., 5.

²⁴ Poulsen and Zachariasen eds., Stockholm 33 4to, ch. 8; Lund 15, ch. 15.

²⁵ Poulsen and Zachariasen eds., Stockholm, ch. 11; Lund ch. 16.

²⁶ For definitions of foreshore as they vary in English, Scottish, and Udal law, see D. McGlashan, R. Duck and C. Reid, “The foreshore: geographical implications of the three legal systems in Great Britain,” *Area* 36, no. 4 (2004): 338–347.

between the high and low tide marks. If a whale drifted into this area, it usually became the property of the owner or renter of that parcel of shoreline. In Orkney, Shetland and Norway, the foreshore ends at the *marbakki*, where the submarine coast slopes toward the deep or the coastal shelf.²⁷ However, the Icelandic definition varied from these simpler eastern North Atlantic definitions: “In the Icelandic sources the inshore legal régime presents itself as an elaborate system of intertwined regulations concerning the dart [or spear], . . . the graded inshore zones, the shooter’s, salvagers’/towagers’, landowner’s and tenant’s duties and rights.”²⁸ The landowner possessed liberal coastal rights up to the *netlög*, approximately 7.5 meters depth offshore, technically “the point by ebb where a seal net 20 meshes deep stands on the bottom with floats at the surface.”²⁹ The laws clearly state that “Everyone owns his own catch outside the netlaying line.”³⁰ Beyond that, the common waters were defined by the *rekamark*, or “beyond the range at which an unsplayed fish can be seen on a boat’s side: that is to be a codfish of such a size that when splayed it is an ell wide across the brisket. . . . That fish has to be visible on a boat’s landward side, seen from the shore on the line where the tide goes out farthest.”³¹ No wonder the sagas depict so many battles over stranded whales, for there was no absolute reckoning of the common fishing, scavenging and hunting boundary. Norwegian laws took necessary pains to define hunting territories and property rights not just on open waters, but within more restrictive fjords, as well: “If a whale drifts into a fjord where arrows may be shot past it from either shore, the whale belongs to both shores, unless there be a shoal there and the whale is therefore stopped farther out; in that case it belong to the [nearest] shore.”³²

The examples cited thus far make clear the great concern over legal hunting rights and property rights. They have also illuminated, albeit obliquely, the means by which whales were hunted. Laws allude to hunting methods but nowhere directly lay out the proper or common manner by which whales were hunted, shot and captured. Ownership,

²⁷ Lindquist, 1995, 36–37; Ryder, 13; Norway’s foreshore is further defined as ending at the point where the shore drops into the deep, while Orkney’s ends specifically at “the lowest stone in the ebb.”

²⁸ Lindquist, 1995, 38.

²⁹ Lindquist, 1995, 36.

³⁰ *Laws of Early Iceland: Grágás*; 217.

³¹ *Laws of Early Iceland: Grágás*; K 211; 142.

³² *Earliest Norwegian Laws*, 149, 126.

not means of acquisition, was the greater concern of the laws. Reconstruction of whaling methods must begin with these allusions to whaling found throughout the law codes. The *Gulathing* law just cited, regarding hunting in fjords, provides just such an example of hunting methods and weapons. While arrows might have worked in the narrow fjords of Norway, other tools and techniques were required elsewhere in the North Atlantic.



Whaling in Norway and whaling in Iceland could not be practiced in the same manner. Each law code must be seen as a reflection of the particular region within which those laws were created. Methods of whaling were necessarily adapted according to regional environmental constraints as Norse settlers spread out across the North Atlantic. Some basic aspects of hunting, though, were universal. Men shared the same basic tools and techniques across the North Atlantic, but one key difference was what happened to the whale after its death and how it was brought to shore.

Shot or dying whales have the unfortunate tendency to disappear. Most large whales sink at death, while others swim further to sea once wounded, making recovery questionable if not impossible. Statistically, most shot whales would be lost by the hunter in the premodern era, but one man's loss could be another man's boon. Bjorn Einarsson's account of fourteenth century Greenland reported that a rorqual, a Blue or Fin, came ashore in the Eastern Settlement with a marked shot from Western Iceland.³³ While hunters might not always recover their whale, their efforts were not always wasted: "If a whale drifts up on a man's land within the garth it belongs to him who owns the ground."³⁴ Entrapment of whales seems to have been a favored strategy in Norway as a means of ensuring recovery: "If a man drives a whale into another man's whale cove and bars [the entrance] with stakes, the whale belongs to the one who owns the cove, and the other man shall pay the fine for trespass."³⁵ Whether shot or drifted, the geography of coastal Norway

³³ Lindquist, 1995, 28.

³⁴ *Earliest Norwegian Laws*, 149, 126. A garth is an artificial or augmented enclosure at an inlet, river, or shoreline designed to block or trap fish and other marine quarry.

³⁵ *Earliest Norwegian Laws*, 150.

made entrapment a key method of whale recovery. Even if a whale was driven into another man's bay or cove, at least part of the whale could be recovered by the hunter.

Conditions in Iceland, though, were different. The *Grágás* give no indication that whales were entrapped in voes, fjords or garths and while this may have occurred, particularly in the North, it is not addressed in the laws. Rather, *Grágás* focus obsessively on whales that drift rather than whales that are caught or driven. Whaling in Iceland seems to have been a passive exercise involving neither pursuit nor towing, but spearing or wounding of the whale and leaving it to the mercy of the currents, winds and tides. Medieval hunters would wait for the whale to surface, spear it or strike at it with a lance, and repeat the process as possible. The whale, if too large to secure to the boat, would be left to the current with the hope that the whale would strand ashore and the marked shots would be found. Icelandic laws refer to whales found with multiple 'shots' embedded within them, so the marked shot appears to be a key component of the medieval Icelandic whaling strategy.³⁶

Medieval Icelanders made use of personal markings on their whaling weapons, either on the shaft or blade of the weapon. Faroese whalers, as discussed in chapter four, similarly mark their *grindaknívur*: "The Pilot whale knives, which are made by skillful smiths and creative craftsmen, are as a rule completely handmade. Each knife-smith has his own mark which he stamps into the blade."³⁷ Unique personal marks were used on a number of medieval resources, including a timber-mark used on driftwood and personal marks used on birds. Marking drift items or animals which could stray from one's land ensured that ownership was known. One simply branded one's property.

Each man owns rights to drift off his land, to timber and seals and whales and fish, unless the drift rights have passed from the land by sale or gift or payment... If timber comes to a man's shore, he is to mark it with his timber-mark. It is lawful for a man to wade out to a log if it is so big that

³⁶ In a comparative example, Kodiak hunters similarly used marked spearheads and when hunted whales were washed ashore, a hunter "... [hoped] that his marked spearhead would be recognized and that his village would be contacted for a portion of the whale" (L. F. Yarborough, "Prehistoric Uses of Cetacean Species in the Northern Gulf of Alaska," in *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, ed. A. P. McCartney (Calgary: University of Alberta, the Canadian Circumpolar Institute, 1995), 71).

³⁷ J. Pauli Joensen, "Pilot Whaling in the Faroe Islands" *Ethnologia Scandinavica* (1976): 15.

he cannot get it above the highwater line. If that log comes to another man's shore, then it belongs to the man who owns the mark on it...³⁸

Marking one's property was not a sure means of retaining property, for marks were only valid if they were publicly displayed. "To be legally valid, shots had to be formally announced and registered at the Althing,..."³⁹ Personal markings, particularly those used on weapons, were registered and displayed at local and regional things, as well as nationally at the Althing: "every whale marksman is to show five of his neighbours the marks on the harpoon he intends to use, and afterwards let the harpoon go to the General Assembly and be shown..."⁴⁰ The fact that marked weapons were displayed prior to a fishing trip reveals that whaling was on the minds of fishermen prior to their voyage. Whaling was not the purpose of a trip, but whaling was a likelihood for which one should prepare. The marks of the greatest chieftains may have been known across Iceland or further abroad. When Ólafur Ísfirðingur's Blue whale, shot in western Iceland, washed ashore in Greenland, the finder knew whose whale it was: "The shot mark was recognized, probably by Björn Einarsson himself as it belonged to a whaler of his own district," He will then have paid Ólafur Ísfirðingur his shooter's money upon his return home to Iceland in the autumn of 1387 AD."⁴¹

This tradition of marked shots is not simple conjecture. Numerous accounts of Icelandic whaling in the eighteenth and nineteenth centuries reveal this simple yet risky means of whaling continued in Iceland for centuries.

The only manner, which they employ in some places of the country involves that a boat rows as close to the whale fish as possible, and then one who is used to it darts a large iron harpoon into him, and (the boat) immediately hastens away; this harpoon is marked with the mark of the one who has forged it; and as the whale fish will have to die from it, at least if it is well hit, it later drifts ashore somewhere, if the luck allows; yes presumably (it) also (drifts) off shore if the wind is like that; and if the fish then drifts ashore the one to whom the harpoon belongs receives a certain part of the whale fish according to the Icelandic law and the one on whose ground it drifts ashore the rest. This is all the art which the Icelanders perform in order to catch the whale fish...⁴²

³⁸ *Laws of Early Iceland: Grágás*, K 209, 140.

³⁹ Lindquist, 1995, 25.

⁴⁰ *Laws of Early Iceland: Grágás*, S 453; 333.

⁴¹ Lindquist, 1995, 28.

⁴² N. Horrebow, trans. in Lindquist, 1995, 30.

The marked shot and its recognition was the root of much consternation and conflict within the laws. The hidden shot was the catalyst that transformed a stranded whale into a hunted whale, thus changing the rules of whale division. The issue of drift whales in the lawcodes is of particular interest, for careful study of the details and language surrounding drift whales may indicate that scavenging was frequently a corollary to hunting. In other words, drift whales were often really hunted whales which were lost after being shot. The *Grágás* reveal that active whaling may have been more common than we have previously assumed.



The question of medieval whale use, therefore, is not whether whales were hunted. If the laws and marked shots are to be taken seriously, whales were hunted. The question is whether the investment and effort in shooting or driving whales, minimal as that effort could be, was worth the return. Whale hunting was a risky venture, yet not for fear of mortality. Whaling was not the epic battle of man versus beast. The risk was one of labor investment and returns. Not only did whaling require an investment in basic tackle, including spears, lances and maybe lines, but also an investment of time which could otherwise be spent fishing. If the whale escaped the hunters, both equipment and time better spent fishing were lost. “If household men find a whale and the householder has unlimited right to their labour, then the whale becomes his. But if he has a right only to their labour as fishermen, then he gets no more than the value neighbours put on the delay suffered by their fishing meanwhile, along with a share for his boat, . . .”⁴³ It isn’t clear whether whales actually were considered worth the investment of labor and materials with the high risk involved in their loss.

Whale pursuit could produce other losses as well. Depending upon one’s social status and property rights, loss of a whale could mean fines and penalties. If one pursued a whale which happened upon a herring shoal, and the pursuit continued despite the presence of the herring, fines up to forty marks could be incurred. In an uncommon overlap with literature, the *Kǫng’s Mirror* coincides with the law, as the latter

⁴³ *Laws of Early Iceland: Grágás*, 216.

confirms the protection of the herring driver or Fish-driver, seen as a gift of God.⁴⁴ Also, if one attempted to hunt a whale and rejected the help of other fishermen in securing it, for fear of dividing the prize, fines were assessed if the whale was lost. "If whales are found in openings in ice beyond the boatside-fish range, then each man has a right to all he can avail himself of. If men come and use weapons on whales and secure them to the ice-rim so that they will not sink, then they belong to those who caught them. If they refuse assistance of other men and the whale is lost, they are responsible for the whale to those who would have helped."⁴⁵ If one lost resources that could have had communal utility, punishment was required.

Given their access to imported and local goods, it may seem unlikely that Icelanders and other North Atlantic fisher-hunters would invest labor, equipment and time into such a high-risk, high-loss venture. Was the loss of whales, which must have happened frequently, compensated by occasional hunting gain? Lindquist reports the frustration of an eighteenth century peasant fisherman of Northwest Iceland who faced just such a question: "none of the five whales [the fisherman] had speared in one day later showed up. After that he decided never again to attempt this hunting."⁴⁶ Active whaling was not beyond the technological skills of medieval hunters but whale recovery could be. If the whale was recovered or drifted to land, then the rewards could be massive. Rewards depended on where the whale landed and who found it. The sagas, it appears, may plausibly recount the problems and struggles over whales that washed ashore.

Scandinavian laws reveal a portrait of active whale hunting that we have not appreciated hitherto, explaining why conflicts could result over stranded whales. Shooting a whale, while requiring strength, skill and strategy, seems to have been nothing compared to claiming and dividing a whale. "The three paragraphs on deep-sea whaling [in *Gulathing* law] simply were sufficient to come over all possible legal conflicts which might arise during whale-hunting at sea.... Stranded whales on the other hand bring about masses of questions."⁴⁷ Clearly Norwegians and especially Icelanders faced a host of problems with whale division and scavenging. The sagas, as seen in the previous chapter, focus on

⁴⁴ *Earliest Norwegian Laws*, 149.

⁴⁵ *Laws of Early Iceland: Grágás*, 217.

⁴⁶ Lindquist, 1995, 39–40.

⁴⁷ Schnall, 14.

stranded not hunted whales, and those whales commonly were the subject of brutal battles over ownership claims. The frequency and familiarity of these violent episodes leads us to recognize them as a recurrent motif, a means of showing off the Icelandic love of the law, feud, and the tempting specter of thirty free tons of meat, fuel and bone. But we also must consider these episodes as representatives of real, yet not historical, battles that could have occurred over whales as rightful property, the subject of disputes caused by ambiguities in law and circumstance.

An interesting comparison may be found with a brief digression into medieval English law. Whales, classified as wreck, were owned by the kings of England from the eleventh century onwards.⁴⁸ Kings granted portions of whales or whole stranded whales to great landowners, especially bishoprics or abbeys who had particular need at certain times of year for the 'cold flesh' of cetaceans. But local populations paid no heed to charters and laws against scavenging. It is no coincidence that: "...the right to take wrecks and whales was not known by an Old English name."⁴⁹ Anglo-Saxons may have freely scavenged prior to the Norman Conquest, but after 1066, the rigorously protected royal rights of the continent dominated. A dispute between representatives of Battle Abbey and the burgesses of Romney over a stranded whale provides interesting insights into the problems of whale ownership.

On Friday, February 9th, 1258, a fish forty feet long and about six feet thick was cast up at Dunge Marsh at daybreak and remained unperceived except by the bailiff and the abbot's men till nine o'clock, owing to snow and a violent wind. Then came burgesses of Romney and tried to get possession. The bailiff, fearing a breach of the peace, forbade them in the name of the king and of abbot Ralph to touch the fish or infringe the

⁴⁸ Wreck was defined as all property abandoned or lost at sea which was not intended to be reclaimed. Stranded sturgeon, whales and all manner of great fish thus were asserted to be royal property under this definition. *Bracton on the laws and customs of England*. Vol. II, trans. S. E. Thorne (Cambridge: Harvard University Press, 1968), 339. English kings from the reign of Henry I in the early twelfth century attempted to claim rights to all royal fish which were taken at sea, including all cetaceans. Ireland, Spain, France and Scotland, to name but a few nations, all have medieval laws on the monarch's right to wrecked goods and whales. Henri de Bracton, England's great thirteenth century jurist and author of *On the Laws and Customs of England*, wrote that the king not only claimed all whales that drifted to the shore, but also whales "found close to shore, or far out to sea, provided it can be proved that they would have landed on the shore" (Bracton, 339).

⁴⁹ M. Gardiner, "The Exploitation of Sea-Mammals in Medieval England: Bones and their Social Context," *Archaeological Journal* 154 (1997): 177.

custom of the manor. The elder men obeyed, grumbling, but bargained to have part of the fish given or sold to them. The bailiff said that was beyond his power, but presumed so far on his master's liberality as to make presents to the more important men. The rabble, however, threatened force; and the bailiff, mindful of the rough ways of sailors, to avoid bloodshed, made a speech in which he asked his "good friends and neighbors" to help him to cut up the fish, and told them they should be rewarded for their trouble. The men of Winchelsea arriving later were given the same terms as those of Romney. The constable of Dover and the sheriff claimed the fish for the king, but the bailiff pleaded the abbot's liberty and succeeded in keeping the peace for five or six days and in preventing anyone from carrying off portions of the fish without his leave.⁵⁰

Whatever the veracity of the Battle Abbey charter, the case of the 1258 whale stranding at Dunge Marsh provides compelling insight into medieval English perceptions of proper ownership of stranded whales.⁵¹ Three particular issues of import arise from this account: the value of the law, the knowledge of whale strandings, and the methods of whale butchery.

First, the fact that three parties, the monks of Battle Abbey, Henry III, and the men of Romney and Winchelsea, claimed rights to the whale indicates that the charter for Battle's rights to stranded whales either was not known or was disputed long after it was granted and renewed. The locals obviously perceived some right of ownership to the whale, despite what the laws might dictate.⁵² Even if they had knowledge of the laws, they continued to assert their right to a portion of the whale. There is little surprise that attempts to claim the whale were made by local men, since stranded animals likely had been taken freely from the shore prior to the Norman imposition of wreck laws. The stifling of local tradition could not occur immediately, so many may have felt that whales belonged to the local populace by tradition.

Second, the statement was made that the whale had "remained unperceived" for a period of time. While the abbot's men had reached the whale by the evening, this account does not tell us when the whale had stranded. It is possible that whales could go unperceived for extended periods of time or that officials of the crown or church went uninformed of this discovery in favor of local exploitation of the

⁵⁰ Charles Johnson, "A Claim to 'Royal Fish' Stranded off Dungeness," *Archaeologia Cantiana* 47 (1935): 105–106.

⁵¹ Johnson, 106.

⁵² Gardiner, 178.

whale. This notion is confirmed by Gardiner: "...claims to wreck and to stranded cetaceans were very difficult to enforce unless the interest of the finder was recognised. It was too easy for beachcombers to conceal goods found on the sea-shore."⁵³ Although it seems implausible, even a sizable whale could remain hidden from authorities if the coastlines were not routinely surveyed: "Sheriffs made inquiries about wrecks and stranded cetaceans on behalf of the king during their half-yearly tours, but many stranded whales must have long been cut up and consumed long before their appearance."⁵⁴

Finally, it is stated that the hapless bailiff of Battle held off the angry throngs from carting away the whale for "five or six days." We are given few details in any medieval accounts of the length of time it took to butcher a large whale. Norwegian law also describes the butchering of a whale which can occur over a period of five days, so this may have been a typical period within which a whale was still considered usable.⁵⁵ The whale in this account was described as forty feet long, and many people were said to have assisted in cutting up the whale. These men of Romney and Winchelsea were rewarded for their help, perhaps with portions of the whale. We are also told that snow had prevented earlier discovery of the whale, so cold weather had possibly prevented the spoilage which naturally occurred in large whales due to internal decomposition.⁵⁶ Ultimately, the whale was given to the abbot of Battle, who then distributed it among the king and high churchmen: "the abbot sent... to the king, half the tongue and four large pieces of blubber, [and] sent presents of parts of the fish to the archbishop of Canterbury, the bishop of Chichester, the chancellor, the treasurer and others, to the number of 120."⁵⁷ If the whale had been butchered over a period of five to six days and then distributed throughout southern England, some level of freshness must have been maintained by salting or curing the meat. The complications of stranded whales, particularly

⁵³ Gardiner, 177.

⁵⁴ Gardiner, 177.

⁵⁵ *The Earliest Norwegian Laws*, 396–397.

⁵⁶ If the whale had been gutted and bled, as is typically done in modern and traditional whaling, decomposition could have been arrested. In dead great whales, high internal body temperatures can be maintained over a period of several days even when the whale has been partially butchered. Personal communication, Jerry Herman. Lindquist confirms the rapid rate of decomposition in large whales: "...putrefaction... progresses quickly in whale carcasses because of the internal body heat and the blubber insulation" (Lindquist, 1995, 28).

⁵⁷ Johnson, 106.

possession and butchery rights but even edibility, forced North Atlantic lawmakers to address these problems in a comprehensive manner.



Whale stranding laws cannot be neatly separated from hunting laws. Every hunted whale ultimately was brought to shore. Depending on the size of the whale, even if hunted and legally obtained at sea by one individual, the whale could be subject to multiple claims once brought to land. The ownership and division of stranded whales differed according to each law code, with seemingly endless variables complicating whale ownership. The whale's size, the manner of the whale's death, the presence or absence of a marked shot, the discovery of a wound in the whale, the precise location of its landing on shore, the claim of the land-owner and the status of the finder are merely a few of these complicating factors. The sagas, more than any source, reflected the reality of disputes over the minute details of strandings, disputes made more difficult by highly subjective laws. This recitation of such dim distinctions of stranding law underscores the complexity but also the clear value of whales and other driftage.

The most important step in scavenging a stranded whale, regardless of the origin of the whale, whether hunted, stranded or drift, was securing the whale to the shore. Hunters may have attempted to secure shot whales to boats, but we must imagine that small medieval fishing vessels were not stable or equipped for the towing of a creature weighing many tons. Even with the buoyancy of some large rorquals, controlling a laden vessel in North Atlantic winds and waters was a tall order. "If a whale is set so strongly by current or wind that it controls the boat and not the boat the whale, then it is as if they have not found it."⁵⁸ Whales that were not secured on land or at sea were not considered legal possession and possession became the most important issue once the whale reached the shoreline.

The manner in which a whale was secured was not a simple task at sea or onshore, especially considering the difficulties of harnessing a twenty, forty or sixty ton behemoth from the pull of the high tide on a rocky or featureless shoreline. The whale's finder was obliged to secure

⁵⁸ *Laws of Early Iceland: Grágás*, K 216; 147.

the great bounty even if the finder himself was not eligible to claim the whole whale.⁵⁹ Securing a whale, either a complete or floating portions of a carcass, was worth the effort despite the difficulty, for great rewards were allotted to the finder. "The men who first found the whale have the right to finder's blubber even if other men attach securings to it while they go to get help."⁶⁰ The finder's reward according to *Grágás* was phenomenal. For a whale twenty ells or bigger, the finder received thirty loads of blubber and meat, each load weighing approximately thirty pounds. All of the lawcodes made specific and generous allotments for the finder of a stranded whale and each lawcode dictated different quantities and stipulations. *Frostathing* law simply states:

The finder shall secure the whale [with ropes] and he shall have the finder's share of the blubber. . . . He shall have what can be loaded on a boat that is nine ells along the keel and has four planks on each side from the keel up; and he may load it as full as he likes, [only] so that it does not sink. But if it sinks before the stern has traveled to where the prow was, he has nothing to claim. . . . There shall be one man in the boat; he shall have an oar, a bailing dish, and one bottom board. . . .⁶¹

The allowance given to the finder is even specified by anatomical region. The finder is not given any old blubber, but blubber taken from "the dorsal fin outward and backward along the sides and in to the bones."⁶² This cut was the prime choice of the whale, the meat of the lumbar and caudal regions of the vertebral column, where the strong tail muscles attach to bone. The finder clearly deserved a magnificent reward for his labors.

Gulathing law makes similar account of whale security and reveals additional ways that the finder could secure a whale if neither rope nor line were available: "it is lawful for a man to secure a whale . . . with securings which slices from the whale . . ."⁶³ These securings were likely sinews or tendons, as whale skin is too thin to hold securely. As with *Frostathing* law, the finder according to *Gulathing* law received an immense share of the whale, albeit a more measured portion than the heaping load of *Frostathing* law:

⁵⁹ Social status was a major component in whale ownership and certain types or sizes of whales could not be owned by certain classes of men.

⁶⁰ *Laws of Early Iceland: Grágás*, 217.

⁶¹ *Earliest Norwegian Laws*, 10.

⁶² *Earliest Norwegian Laws*, 10.

⁶³ *Laws of Early Iceland: Grágás*, S443; 325.

If a man comes upon a whale close to land and it is larger than one is allowed to keep, he shall have the finder's share in the blubber. Let him cut a mark into it and go to report [the find] to the bailiff; he has then the finder's right to the blubber from that whale. Let him take an arrow shaft and let him measure out a square as long as a man's hand, and cut this down to the bone. [Let him take] the same length on the oar used amidships and let him place a rope around the oar where the blade begins, and let him cut down to the bone a rectangle as wide as the rope measure is long; [also one] as long as the steering oar [or one] as long as the bailing dish and the bottom board astern.⁶⁴

Estimates of the blubber share were made using readily available tools found at a stranding site, so some standard measure was maintained. This fixed share of blubber was the standard finder's amount, regardless of the species of whale. The finder merited such generous reward because the rest of the whale would provide significant resources to landowner, his farm, his servants, as well as a possible hunter, his crew and the greater community. Securing whales was necessary because whales were basically communal resources, so important that they were secured even on holy days and Sundays when other labor was forbidden: "If a whale drifts up on a man's shore, then he has the right to secure it even though it is a Sunday so that he thinks it is in no danger of being swept away, whether he uses old securings or such as he cuts from the whale for the purpose. It is lawful for him to secure it with securings which he slices from the whale and to attach the securings round logs or rocks there."⁶⁵

The value of whales and the importance of the finder's ability to secure the whale are evident in the punishments meted out to those who failed to make fast stranded whales: "If a whale drifts away before the fifth day and no [part of the] rope remains fast on the land, the one who found it shall pay fifteen marks, unless the rope proves to be broken; then there is no penalty, if a part of the rope remains on the land..."⁶⁶ Shoddy care was a punishable offense, but no punishment was meted out for the use of poor materials, since presumably anything that could be used to secure a whale had to be used. The finder could not be punished for the resources mustered to secure the whale, but sloppy handiwork in tying the whale down, even if it had remained in

⁶⁴ *Earliest Norwegian Laws*, 127, 150.

⁶⁵ *Laws of Early Iceland: Grágás*, 213.

⁶⁶ *Earliest Norwegian Laws*, 10.

place for several days, was criminal. Inappropriate care in securing a whale meant loss of rights to the whale, finder's portion and all. The *Grágás* reiterates this point:

If the whale is swept away along with its securings and drifts up [on] another man's shore, then the man to whom it belonged on the shore where securings were first attached to it is still the owner of it as long as some remnant of the securings remains on the shore and a panel gives a verdict that the whale was secured in such a way that it would hold in such weather as prevailed when they secured it. ...if the panel gives a verdict that it would not hold, then it is as if the whale was never secured....⁶⁷

The laws seem most concerned with the notion of communal good. Whales were to be secured as well as possible, not only for the finder's benefit but for the benefit of all.

In short, the law asks that whales be treated as if they were personal property, even by those who had the smallest claim upon the whale. When men came upon a whale on a shoreline over which they did not possess ownership, they still would receive some share of the whale but they were obliged first to secure it. They also had to send immediate word to the landowner, after which the finders could begin to flense the whale for appropriate shares. Once that share was claimed the finder could not allow the whale to drift away with wanton disregard, and the securings used to hold the whale were left in place. "But if the unflensed part is swept away, then they [the flensers] are not responsible for that, as long as a panel gives a verdict that the flensers secured it as they would have done had they themselves been the owners of that whale. But otherwise, if that verdict is not given, then they are responsible."⁶⁸ Securing the whale was only another stage in the long process of hunting and claiming a whale. One could secure a whale to shore and still be denied any claim to the whale, depending upon the law code of a given region and the status of the man who set claim.

As with all matters in medieval Scandinavia and the medieval world, social status was the first consideration in one's legal rights. In the earliest laws of Norway, a man's rank and a whale's size are two important factors in determining which stranded animals could be claimed. According to *Gulathing*, stranded cetaceans up to and under

⁶⁷ *Laws of Early Iceland: Grágás*, 213.

⁶⁸ *Laws of Early Iceland: Grágás*, 214.

fourteen feet could be claimed by a hauld or a land-owning yeoman, while whales up to twenty-seven feet could be claimed by a man of higher rank.⁶⁹ Small whales were subject to fewer laws, as they could scarcely be divided among many claimants unless a large number of cetaceans were found. “Lesser whales,” presumably meaning small species of dolphins and porpoises, “belong to the freemen who find them.”⁷⁰ While freemen were given rights to smaller cetaceans, slaves were not allowed to retain any portion of whales which they found: “...if a thrall comes upon [a lesser whale], his master owns it.”⁷¹ ‘Raven whales,’ which are only briefly mentioned in association with Beluga whales in the *Kǫng’s Mirror*, are one of the few small whale species specifically mentioned in the *Gulathing* stranding laws. Unlike other whales which were divided according to length, the Raven whale simply was legislated by its species: “A hauld [Norwegian tenant farmer] has the finder’s right to an entire raven whale. But if a well-born man comes upon such a whale, he has the finder’s right to one-half.”⁷² In order to prove that he had legal right to a whale of a certain size, the finder was obliged to “cut [the whale] up before witnesses, or...leave behind the backbone, the head, and the tail fin; then these parts if he has no witnesses, shall testify for him.”⁷³ With the head and tail fin remaining, along with the entire length of vertebrae, the type of whale which had stranded could be determined by others if disputes arose over the rights of ownership. The Norwegian *Frostathing* law likewise determined that physical proof was necessary to claim whales. In the Trondheim region, whalers were required to “bring the dorsal fin to the thing and let it testify for him.”⁷⁴

Class was an important element in whale division, but the most important criteria of division were based on property and boundaries where the whale landed. Personal property rights preempted most other claims to whales. While finders and hunters and those who secured whales were guaranteed a share, simple location also assured a high

⁶⁹ The laws do not specify whether women could claim stranded whales, but social status may have transcended sex.

⁷⁰ *Earliest Norwegian Laws*, 396.

⁷¹ *Earliest Norwegian Laws*, 396.

⁷² *The King’s Mirror (Speculum Regale—Könungs Skuggsjá)*, trans. by L. M. Larson (New York: Twayne Publishers, Inc., and The American-Scandinavian Foundation, 1917), 120; *Earliest Norwegian Laws*, 396.

⁷³ *Earliest Norwegian Laws*, 127.

⁷⁴ *Earliest Norwegian Laws*, 10.

prize. The rights of landowners have been continuously referred to throughout the laws cited in this chapter, and most laws were extremely careful to allow for any number of circumstances under which even personal property could be disputed. One interesting directive in *Gulathing* even takes note of disputed whales along property boundaries: "...if a whale comes onto a boundary dividing men's shores, then each of them owns half of it as long as some part lies across the middle of the boundary line."⁷⁵ Division of whales upon private property and common ground was surely the cause of many disputes, so the laws take into account both land and coastal rights. In short, the laws attempt to forestall any disputes over a wide range of drift whale scenarios. *Frostathing* law notes with subtlety the difficulties of whales which drift within, but not fully within, coastal property: "...if a whale drifts in upon the fishing grounds of a man who has the right to cut it up, he shall have all that part that lies inside his grounds; but the king and the freemen shall have the part that lies beyond the grounds."⁷⁶

This quotation raises the problem of royal rights, which trumped all others in Norway, if not in other North Atlantic settlements by the later Middle Ages. The king's rights always could encroach upon those of landowners, hunters and finders, although most of the law codes surveyed herein reveal royal restraint. Only one law within the *Gulathing* seems to show the preeminence of royal right, which is asserted when the whale in question overwhelms the status of its finder. "If a whale drifts up on a man's land outside the garth and it is larger than a finder is allowed to keep, the king shall have one-half and the owner of the ground one-half."⁷⁷ Even here, though, the king only keeps what another man legally might not. The king did not transgress the law and seize the whale, and royal right was only asserted where disputes could otherwise arise. This seems to underscore the obvious importance of whales across the North Atlantic. Whereas most European monarchs claimed whales as royal fish, without regard to local tradition or customary rights, such royal abuses could not occur in the north where the reliance upon whales meant more than simple custom.

The king claimed the whale, in part, so that others would not compete over it, but conflict and violence over whales remained common. Even

⁷⁵ *Earliest Norwegian Laws*, 149, 126.

⁷⁶ *Earliest Norwegian Laws*, 149, 126.

⁷⁷ *Earliest Norwegian Laws*, 149, 126.

after legal claim was granted, whales were still stolen. Men could claim rightful finder's rights or property rights to whales in the sagas, but theft seemed to prevail. While many of the saga villains seemed to get away with their crimes, the laws dictated serious fines and punishments for those who dared steal such valuable quarry. "If a man comes upon a whale and binds it with a rope, and men come by night and cut up the whale while it is still bound, each one is a thief to [the amount] of forty marks, but to [the amount] of fifteen marks if he cuts it up by day."⁷⁸ *Landnámabók* recounts the legal action taken by Lón-Einarr when a whale which he secured to his shore drifted during a storm to the shore of his neighbor, Einarr Sigmundarson. Lón-Einarr rejected both the notion that he had secured the whale poorly and that the weather had driven the whale elsewhere. Rather, he accused Hildigunnr, wife of Einarr Sigmundarson, of theft and sorcery, reminiscent of the witch-whale cabal as seen in chapter six. Lón-Einarr concluded that Hildigunnr stole his whale by performing sorcery to make the storm blow and the whale drift.⁷⁹

The worst crime of whale theft, though, was outright theft of an entire whale. While it seems unimaginable, impossible or comic to steal a whole whale, in fact it could be an exceptionally simple crime. In Iceland, all one had to do to steal a whale was to hide a marked spear or shot. If a stranded whale washed ashore on private property and neither finder nor hunter claimed it, the whale could be stolen as long as the marked shot was never announced or sought out. The consequences of this theft, if discovered, though, were grave. The hidden shot and the drift whale were the subjects of numerous laws in the *Grágás* in order to prevent this most grievous theft.

When a whale washed ashore, the finders were legally required to search the whale for a shot, even if they possessed wreck or scavenging rights for that shore. There is almost an implicit acknowledgement that a stranded whale was always potentially a shot whale that had drifted. "[A] man is to search for a harpoon in the same way as he would if he had hopes of finding his own harpoon in a whale on someone else's shore..."⁸⁰ A stranded whale became a hunted whale when the killing

⁷⁸ *Earliest Norwegian Laws*, 150.

⁷⁹ *Landnámabók*, *Hauksbók* 63; paraphrase from *Prolonged Echoes: Old Norse myths in medieval Northern society. Volume 2: The reception of Norse myths in medieval Iceland*, ed. M. Clunies Ross (Odense: Odense University Press, 1998), 31.

⁸⁰ *Laws of Early Iceland: Grágás*, S 447, 328–9.

shot was revealed, but this wasn't always straightforward. Shots could be embedded deep within the whale or could be lost during the butchery process, only to be recovered in the guts and sand on the beach. The person who first located the shot within the whale received a load of blubber as a reward from the harpooner's share, an incentive almost certainly intended to prevent the concealment of a marked shot.⁸¹ Failure to search a whale for a marked shot had serious consequences: "If the shore owner or man in charge of the flensing does not search for the harpoon, or has it searched for less thoroughly, then his penalty for that is lesser outlawry."⁸² Deliberate concealment of a marked shot, tantamount to whale theft, warranted Iceland's most severe punishment: "if men conceal an assembly-displayed harpoon of his, a harpooner may choose to pursue it as theft of the whale, and make full outlawry the penalty."⁸³ The *Þórsbók* adds that the harpooner must produce two witnesses to testify that the shot and its mark had not been given away or sold.⁸⁴ The value of whales was so great and the drift-range of shot whales so vast that finders were obliged to display marked weapons found within whales for up to two years at General Assembly.⁸⁵ They also were obliged to hold the income from sale of shot-whale products for the whaler if he never claimed his whale. Those who reaped the benefits of a shot whale, finally, had to pay a hunter what amounted to a fee for his services.⁸⁶ The whaler was seen as providing a service for the community, which resulted from his personal risk and investment and demanded appropriate reward.

Close consideration of the whaling laws reveals that stranded whales were not what they always appeared to be. Stranded and scavenged whales were habitually searched for marked shots, at least in theory, because not all whales were simply stranded whales. They could be hunted quarry set to the current and tide and with knowledge and more than a little luck, they would turn up on a local shore. Drift was a medieval Icelandic hunting strategy, one that required community cooperation.

⁸¹ *Laws of Early Iceland: Grágás*, S 447, 328–9.

⁸² *Laws of Early Iceland: Grágás*, S 447, 328–9.

⁸³ *Laws of Early Iceland: Grágás*, S 453, 332–3.

⁸⁴ O. Lindquist, *Peasant Fisherman Whaling in the Northeast Atlantic Area, CA 900–1900 AD* (Akureyri: Háskólinn á Akureyri, 1997).

⁸⁵ *Laws of Early Iceland: Grágás*, S 451; 331.

⁸⁶ *Laws of Early Iceland: Grágás*, K 215; 144–146; "if they do not bring the full price, then that becomes appropriation and they must pay double the amount the price falls short."

But such was the way of life in medieval Iceland, at least during the Commonwealth. In this so-called ‘Great Village,’ the only enforcers of law were the citizens themselves. Communal cooperation allowed civilization to thrive in medieval Iceland and whaling was just one of many cooperative efforts that ensured Icelanders’ survival. To behave otherwise could result in the sorts of episodes seen in the sagas, brutal, bloody, and divisive feuds that threatened to disrupt Iceland’s social balance. The laws try to prevent exactly what was most popular about whales in the sagas, the entertaining feuds which resulted over the division of this most valuable prey. The sagas record the dramas of Iceland rather than the daily routine. The stranded whale episodes were exciting for saga audiences because they represented the potential rather than the actual.



From shooting to securing and claiming to feuding, the laws also consider the final stage of whale use, namely butchery, which began as soon as the whale was secured and even while legal claims to whales were still being made. Whale butchery, as one might imagine, was as long, arduous and unpleasant a task in the Middle Ages. As shown in the ethnographic evidence in chapter four, butchery can be dangerous because of the build-up of gasses within the whale and the slippery conditions of working in, around, even on top of the bloody whale carcass. Butchery was more dangerous, though, when rivals attempted to steal the whale, as seen in several of the sagas. Since the process of stripping a carcass and transporting whale products was time-consuming, taking a week or perhaps more depending upon the size of the whale, one must have been constantly exposed to the threat of rival claimants. The laws attempted to allay such conflicts in their often perplexing precision regarding territorial rights, but laws are only valuable when obeyed, as they seemingly weren’t in the sagas.

The illustrations that accompany the laws of medieval Scandinavia, alongside Olaus Magnus’ illustrations from *Carta Marina* and the *Historia*, provide visual evidence for medieval whale butchery.⁸⁷ The images

⁸⁷ P. Foote, “Introduction,” in Olaus Magnus *Historia de Gentibus Septentrionalibus Romae 1555*, Vol. 1, ed. Peter Foote, trans. Peter Fisher and Humphrey Higgins (London: The

detailed here all derive from fourteenth to sixteenth century manuscripts of *Þónsbók* and the collections at the Arni Magnusson Institute, Reykjavík. Three of these images occur as illuminations within the initial 'h' of the word *hvalr* or whale.

The first *Þónsbók* image (Fig. 27) shows three men wielding short blades and a larger, curving sickle-shaped object.⁸⁸ One man, with the sickle, is bent over as he butchers the small, blue creature, which resembles a sirenian or pinniped more than a cetacean. Importantly, it does not look like a large fish, which is so common among continental illustrations of whales. The animal, with a vertical, piscine fluke, sits above small wave-like curls drawn beneath its body. The whale's eye is open, as is its mouth, which has neither teeth nor baleen. The first man butchers the animal along its side and behind the pectoral fin, which looks more like a seal's flipper than a fin. Above the first butcher stands another figure who sharpens his knife, while a third man stands in the background with butchering knife drawn, perhaps waiting his turn for a chance to get at the whale. This whale is a shared resource, a perfect illustration for the accompanying laws.

Another edition of *Þónsbók*, also fourteenth century, shows a similar scene, with two men and a small marine mammal. Again, the small creature resembles a seal with a small rounded head, a clearly defined forelimb and a split vertical tail (Fig. 28).⁸⁹ This animal, like the first, is shown in the water, with tall lapping wavelets licking its underbelly. As in the first illumination, one man stands above the animal, using the same style of tool as found in the first image, and the second man likewise carries the same short knife as his parallel figure in the previous illustration. The whale is butchered along its side, behind the pectoral fin, just as seen in the first image. In both cases, the butchery area corresponds with the lumbar and caudal vertebral region, where the choice meat is found.

The third image from another fourteenth century *Þónsbók* (Fig. 29), varies from the first two depictions. This butchering scene, again in the initial 'h,' shows four individuals working simultaneously on a much larger creature. This whale is more clearly a cetacean, with a split

Hakluyt Society, 1996), xliii. Illustrations from other works are also used in the *Historia*, including initials and woodcuts from Johannes Magnus' *Historia*, Holbein's Old Testament illustrations, and the *Dyalgus creaturarum moralizatus*; Foote, Introduction, xliii.

⁸⁸ J. Kristjánsson, *Icelandic Sagas and Manuscripts* (Reykjavík: Icelandic Review, 1980), 7.

⁸⁹ J. Simpson, *The Viking World* (New York: St Martin's Press, 1980), 88.

fluke tail, although whether this tail is vertical or horizontal is not clear since the whale is being supported awkwardly upright by its butchers. This blue-white whale is the height of two men, with a thicker body which narrows at the tail and streamlines at the animal's head. It is a much more sophisticated depiction of the whale than the seal-like images of the previous illuminations. The whale's mouth appears as a long, curving line, which could represent a baleen whale, perhaps even the much-revered *reyður*. Two men, in much smaller proportion to the whale compared to the first two images, work above or on top of the whale, and one uses a long knife with a flat-edged tip and a rounded handle. These men, again, appear to be cutting into the same area of the dorsal fin above the pectoral assemblage, the area as dictated by *Frostathing* law as the finder's blubber. Three small blocks of skin or blubber, shown in the same color as the whale, float above the whale between the two men, representing the meat and blubber that has already been removed. Below, two more men butcher the whale, one working along the whale's side, near the pectoral fin, while the other cuts away from the whale's tail. The three main butchers focus on the area of the whale with the best cuts of meat and as in the other images, they use similar simple tools.

From the sixteenth century, the final *Jónsbók* image appears distinct from the others discussed here (Fig. 30).⁹⁰ This scene occurs below the text, rather than actively framed within an initial. Three men work on this whale as a fourth leads away a cart of flensed blubber and butchered meat. The whale itself is shaped like a huge fish, with dorsal and ventral fins set close to the tail, and body-length stripes decorated with small curving strokes, perhaps representing scales. The stripes could also be primitive attempts to depict the grooves and folds from excess skin of baleen whales, skin which expands during feeding. Despite looking somewhat piscine, the great fish breathes like a whale, exhaling through a blowhole atop its head.⁹¹ This whale has been secured to the shore by one man, and is being butchered by two others. One man works

⁹⁰ J. Kristjánsson, *Eddas and Sagas: Iceland's Medieval Literature*, trans. Peter Foote (Reykjavík: Hið Íslenska Bókmenntafélag, 1988), 10–11.

⁹¹ Little has been said of depictions of whales other than those in the *Physiologus*, bestiary and Olaus Magnus. The most prolific whale artist of North Atlantic history must be Jón Guðmundsson, who in the seventeenth century wrote a natural history of Iceland featuring numerous illustrations of whales. Each whale was depicted as distinct in appearance and behavior. Guðmundsson's natural history stood as the authoritative text on cetaceans for centuries thereafter.

along the whale's side, like the butchers of other illuminations, using a curved knife while the other, working on the whale's head, uses a straight-handled knife. While all of these *Þónsbók* images depict butchery, this one goes farther by showing how the whale was secured to the shore, and by depicting a horse transporting the whale products from the butchery scene. This image also may reveal something of those who were able to claim whales. Of the four men in the scene, the man who butchers the whale at its midsection is distinguished by his clothes and his red hat. The three other men, one who butchers, one who secures the whale, and one who leads off a horse laden with whale meat, all wear simple dark hoods. This man with the distinctive red hat may be the landowner or a man of higher status who claims the whale.⁹²

Olaus Magnus' images from *Carta Marina* and *Historia* also depict realistic scenes that obey Scandinavian butchery law, as Olaus shows us whale butchery on the shoreline. In the first illustration (Fig. 31), a great whale is anchored firmly to a shoal while two boats are seen near the whale, perhaps boats used by hunters. On the shore, two wagons are seen, one rushing off with a cartload of whale products, the other in the process of loading up with three barrels of goods, perhaps blubber or oil. The butchery process itself is the center of this scene. Three men are working on the whale, two with axes, one stripping away skin and blubber more cautiously. Perspective seems to show at least two of the men standing aside the whale, while the flenser appears to be on the whale itself. Butchery, flensing and transportation are all illustrated, and the whale's location is important to note, since the whale is in the water and not on the shore. Likewise this whale is also not in a rural context, but in the urban hinterlands, as a walled city or urban edifice looms in the background, to which the wagons are apparently rushing. The buzz of activity around the whale, more elaborate than the *Þónsbók* scenes, could indicate multiple claimants to the whale or possibly some sort of early industrial activity. The fact that a city and not a farmstead is seen in the background may indicate that these whale products are bound for market rather than home.

The second scene from Olaus Magnus is slightly more exaggerated for several reasons (Fig. 32). This is not a simple great whale, but seemingly

H. Hermannsson, *Þón Guðmundsson and his Natural History of Iceland* (Ithaca: Cornell University Library, 1924): xxv–xxvii.

⁹² Thanks to Barbara Crawford and Anne Brundle for their discussion and insight on this image (October 2007).

a monstrous whale complete with sharp teeth and claws. This whale is so enormous that the men must all climb a ladder to work atop the whale. This beast has been flensed, exposing muscle and bone, although notably its monstrous qualities and fearsome appearance remain. But this image is not original to Olaus Magnus. Many others like it can be found across sixteenth century Europe, as it resembles other continental woodcuts. Whale images, it seems, became formulaic again, just as the *Physiologus* and bestiary whales were so uniform in the high Middle Ages. Now, great large whales strand upon the shore and draw a crowd, their size magnified by the ladder needed for their butchery. A crowd gathers around the grimacing fierce whale and numerous men butcher away on top of the creature. Even the exposure of the whale's masculine member is the same in this woodcut and numerous others. The monstrous whale has been defeated and graphically emasculated, not by a faithful monk in a small coracle, as seen in high medieval narratives, but by industry and butchers and finely dressed tourists.

In all scenes, including those shown by Olaus Magnus, groups of men participate in the butchery using different styles of tools as may befit the task. The flesh and blubber are cut away in measured portions which are composed of skin and the blubber or meat, portions that are set aside or carted away from the butchery scene. Importantly, no whale is butchered by a single individual. The laws would rarely allow sole possession of a whale apart from the smallest cetaceans.

The laws provide details regarding the quantity allowances for finders, hunters, landowners, as well as where the whale should be butchered. When butchering a stranded whale, great care was taken to stay off the agricultural land and the pasturage and to remain, whenever possible, at the waterline.⁹³

He shall cut it up in the water and shall not carry [the parts] up on the green sod; if he does bring them up, the owner of the land shall have one-half of the whale, unless he [the finder] shall redeem it with the fine for trespass, thinking the whale of greater worth. If a man proceeds to cut up a whale where the grass is sufficient to feed a ewe and lamb in the summer, he shall redeem the parts with the fine for trespass if he brings them up [on the land].⁹⁴

⁹³ *Earliest Norwegian Laws*, 126.

⁹⁴ *Earliest Norwegian Laws*, 149, 126.

The simple explanation for this proscription is what the law itself reports, namely to transport the whale beyond the waterline was to transport the whale onto a man's property. Once the whale touched another man's property, trespassing had occurred and the landowner or renter had some rights to the whale. But practical rationale also kept whales off of agricultural land, keeping it upon the shore instead. If the whale was butchered beyond the shoreline, blood, wastes and the weight of the whale itself could impact important agricultural land.

"Any man may kill a snake, but only a Perseus, a St. George, a Cof-fin, have the heart in them to march boldly up to a whale."⁹⁵ Medieval Norse whaling was not a dramatic affair of man versus beast as Melville might have us believe. No Viking Ahabs plumbed their psychological depths by seeking their great elusive whale. Most whaling amounted to little more than opportunistic spearing during fishing excursions or possibly whale drives. No medieval author contends that men set out for the sole purpose of hunting whales, other than Ottar. In short, medieval whaling was neither the high seas adventure of the early modern past nor greedy industrial harvest of early modernity. Laws and sagas show mundane reference to whale use and acquisition, as whales merely were resources to be legislated and divided like any other. The sagas show whales as they were actively used, in episodes based on reality yet not historical fact, while the laws focus on the many ways in which whales were acquired, landed and divided. Medieval North Atlantic whaling, it would seem, is a far cry from the unregulated, unlegislated, random activity that so many medieval historians have depicted it to be.

⁹⁵ H. Melville, *Moby Dick, or the Whale* (New York: Penguin Putnam, 2001), 396.

CONCLUSION



FROM MEDIEVAL TO MODERN: THE LEGACY OF PREMODERN WHALING

Imagine a Norse farm on a warm and sunny day in thirteenth-century Orkney. The unpredictable weather had abated and the temperate days which the farmer and his family had always known in Orkney had returned. As we survey the long house, the byre, the infield and outfield, and the many ecological niches which the farmer's forefathers had so cannily settled centuries ago, we notice countless uses of whale bone. Inside the house, women work on the vertical loom, whale bone weaving battens by their side. A fine, worn linen smoothing board is brought out as linen is pressed for an upcoming feast. Outside, boys play with the vertebrae of a small whale which had washed ashore months earlier, pulling off the epiphyses that capped the bones of the young whale, no older than they were when it had stranded. They drill through the center of these round bones and absently whirl away with their new noisemakers. Further afield, the older boys, their father and fellow farmers cut peat, one using a spade with a heavy whale bone blade. As they rest, they pull out polished bone playing pieces for a quick game. Their work ceases when they see smoke rising from the shore and hear the call. The *grind* have come to the bay. In these days of unpredictable weather, all resources must be gathered, and they rush off to shore. This scene describes a handful of objects in a much longer catalog of artifact types made from whale bone. Upon first glance into

this farm house, whale bone is invisible, one of many materials used throughout the house, yet it becomes omnipresent once sought out.

This imaginary Norse farm could be virtually anywhere in the medieval North Atlantic. We could visualize the farm and its greater territory, beyond the infield, past the outfield and finally to the adjacent coastal territory, property scoured routinely by the landholder and his sons. We can imagine, using an arsenal of legal, literary, ethnographic and material evidence, the scene if a great whale, a rorqual, washed ashore near the farm. The honest farmer secured the whale and began to butcher it, since he held rights to that shore, and after a few minor and unpleasant setbacks involving a perforated whale stomach, he located a spear head bearing the mark of a farmer from a neighboring island. He kept his own butchered portion, as was legally his due, but then sent quick word to his neighbor that a whale which he shot had washed ashore. These men had had words before over coastal rights and a feud was not in the cards today. This honest farmer would not be accused of whale theft. The vertebrae and tail, along with the remainder of the unbutchered whale, were left on shore to testify that the farmer had not claimed a greater share of the shot whale than the law allowed. But he did not take only meat and blubber. The local law, a long-held Orcadian variant of *Gulathing*, allowed him also to take a few plates of baleen, several ribs and a pectoral fin. The meat, upwards of sixty pounds, was dried, boiled and salted, and would feed the family for months, essential if the weather took another turn, as it had done so frequently in recent years. The pectoral fin was additional fuel and the rendered blubber was used to keep the ropes on the farmer's small fishing vessel supple and watertight. The baleen became a handy lashing material for tools around the house and byre. The bone, though, was destined for something even greater. One of the bones from the fin would become a distinctive cup for the farmer, while the dense rib bone was fashioned into fine playing pieces with which the farmer and sons would play *hnefatafl* long into the night.

When De Smet described whaling as "a classic example of uncontrolled predation by man on a marine resource" he simply reiterated the assumptions long held by scholars on premodern whaling.¹ The

¹ W. M. A. De Smet, "Evidence of Whaling in the North Sea and English Channel During the Middle Ages," in *Mammals in the Seas*, Food and Agriculture Organization of the United Nations, FAO Fisheries Series No. 5, Vol. III, 302 (Rome: FAO Advi-

sources surveyed in the preceding pages reveal the deliberate, disciplined and determined use of whales by North Atlantic peoples. Whales were feared and valued, sought out and avoided. Their meat meant the difference between starvation and survival. Their bones were an irreplaceable material in regions that were resource-challenged. Both tantalizing in potential and imperfect in fact, our knowledge of the importance of whaling to medieval northern peoples sheds new light on their resourcefulness. It also gives historical depth to the cultural practices of their descendants, early modern and modern Scandinavians, who continue to use whales today.

The history of whaling has eluded the *longue durée*, remaining an area of historical study with only an industrial past and hints of a meagre prehistory. Whaling history is typically thought to begin with the medieval Basques. The prehistory of whaling has not been totally neglected, though. Whaling nations, especially Norway and Japan, claim that whales were long hunted by their peoples. The evidence presented in this study concurs, at least in part. As has been shown, whaling did occur, but the evidence for active hunting, especially pelagic hunting, has only been teased from the sources by attention to allusion and consideration of a diverse body of sources.

The medieval whalers studied here were largely shore or drive whalers, or opportunistic fishermen who may have shot a whale and then waited to see whether their quarry could be recovered. Equation of the opportunistic hunting of medieval Norse whalers with later industrial pelagic whaling is unrealistic: "From time immemorial the Norwegians have hunted seal and whale.... The early whaling was shore whaling. As the whale became scarcer it was necessary to seek it farther and farther from land and with larger vessels."² The whalers of the medieval North Atlantic sought whales when convenience or necessity dictated and their methods of whaling did not necessarily evolve into an industrial pursuit. Just as historians recognize that Viking raids and the Norse North Atlantic expansion were distinct phenomena, involving many of the same peoples, but movements with very different impetus

sory Committee on Marine Resources Research Working Party on Marine Mammals, 1981).

² Gunnar Isachsen, "Modern Norwegian Whaling in the Antarctic," *Geographical Review* 19, no. 3 (Jul. 1929): 387–388.

and outcomes, so too subsistence whaling and pelagic industrial whaling diverge.

Reconstruction of medieval whaling is not merely an exercise in historical analysis, since medieval whaling plays at least a minor role in the politics of modern whaling. Clearly no connection exists between the harpoon whalers of the industrial age and the traditional whalers of the Middle Ages. For that matter, even the industrial whalers of the eighteenth century, predating Sven Foyn's exploding harpoon of 1868, bear little resemblance to their medieval ancestors. The earliest industrial European whalers until the seventeenth century made use of the same basic hand harpooning methods developed by the Basques in the early Middle Ages.³ Icelandic whaling during this era seems to have remained preindustrial and traditional, using spears and lances more commonly than imported weapons.⁴ Many scholars contend that the Basques in fact had derived their harpooning strategies from the Norse who settled the Continent during and after the Viking Age. Regardless of the derivation, the Basque method of whaling seems to have passed back to the Norse of Ireland and perhaps Britain during the High Middle Ages, although evidence for this whaling method doesn't appear in England, the Netherlands, Denmark and Norway until the sixteenth century.⁵ Thereafter Right and Bowhead whales would become common quarry. While these early industrial whalers did not possess weapons of the strength and magnitude of the late nineteenth-century whalers, they did wreak havoc upon whale populations. Some species, such as Right whales, faced population collapse, and other species fared much worse. The Atlantic Grey whale disappeared from European waters sometime in the eighteenth century. While some traditions of the Middle Ages did persist, by the seventeenth century it had become clear to the whalers themselves that traditional hunting methods had been lost.

³ Early modern whaling in the northern world prior to industrialization is the academic purview of Ole Lindquist, whose *Peasant Fisherman Whaling in the Northeast Atlantic Area, CA 900–1900 AD* is the definitive work on whaling methods and whaling culture of the premodern North Atlantic. O. Lindquist, *Peasant Fisherman Whaling in the Northeast Atlantic Area, CA 900–1900 AD* (Akureyri: Háskólinn á Akureyri, 1997).

⁴ O. Lindquist, "Whaling by Peasant Fishermen in Norway, Orkney, Shetland, the Faeroe Islands, Iceland and Norse Greenland: Medieval and Early Modern Whaling Methods and Inshore Legal Régimes," in *Whaling and History Perspectives on the Evolution of the Industry*, eds. Bjørn L. Basberg, Jan Erik Ringstad, and Einar Wexelsen, 29 (Sandefjord: Kommandor Chr. Christensens, 1995).

⁵ Lindquist cites several sixteenth century English records as evidence of the 'return' of Biscayan whaling to England; see Lindquist, 1995, 22.

P. Claussøn Friis writes, c. 1599 AD... 'Concerning whaling. In olden days one has used many methods or ways in these countries in order to catch whale fish, which can clearly be understood from the Icelandic lawbook, but for the sake of people's incompetence has gone out of use, so they now know no way in which to hunt the whale unless he drifts ashore to them.'⁶

With Sveyn Foy'n's exploding harpoon, the seas changed forever and the culture and technologies of traditional whalers were all but lost. The influence of Foy'n's creation was massive, both in terms of its impact on cetacean and human populations. Within decades, the decline of many North Atlantic and Arctic species was precipitous. The cultural and economic impact on northern communities was equally immense in a host of ways.

While the economic impact was at least initially great, the alienation of whalers from traditional practices and traditional life left many local industries in shambles. Traditional hunter-fishers, who still occupied the coasts of Western Norway, were devastated by the loss of whales and by the fact that, according to traditional knowledge, the Fish drivers or Fin whales, who had been protected since the tenth century or earlier, were also victims of the great age of whaling. Without the Fish drivers, local fishermen claimed that the fish had also disappeared and their major maritime resources were decimated by the industrialized whalers. The Norwegian government in 1904 responded with a law that prohibited whaling along the coast of Norway, for a period of at least ten years. Industrial whalers turned *en masse* to southern waters, and the Antarctic whaling boom began. The old ways of whaling were lost to all but the most isolated and traditional communities.

Medieval historical evidence details over a millennium of coastal and drive-whaling and some pelagic contact with whales, dead and alive. The laws dictate how whales could be used and by whom. While the cultural significance of medieval whaling can only be guessed, the economic and subsistence value of whales to medieval communities is clear. The history of Scandinavian whaling is unspectacular perhaps, but represents a common means of preindustrial exploitation. Dead, dying and occasionally hunted whales were scavenged and shared by coastal and inland farms for the purpose of local consumption rather than export. Medieval whalers would look upon the whalers of the

⁶ Lindquist, 1995, 29.

North Atlantic today with a mixture of familiarity and astonishment. Modern whaling in the North Atlantic, both in practice and application, bears little or no resemblance to medieval whaling, with the exception of Faroese drive-whaling. Whale meat remains a public commodity in Faroese villages, distributed to locals after a successful drive for consumption and secondarily for sale. The Greenlandic whale hunt likewise remains largely traditional, as practiced by the Inuit. Even these traditional whalers of the Faroes and Greenland have updated their whaling technologies, for the safety of the hunters, to expedite the whaling process and especially to hasten the killing blows to the whales. One piece of traditional equipment remains essential to the Faroese hunt, the whaling knife.⁷ Some legacy of the marked weapons of medieval Icelanders is still found in modern populations.

Modern perceptions of whales, while long divorced from the monstrous whale traditions of the *Physiologus* or the *King's Mirror*, retain some of the ancient fascination with these great creatures. In January 2006, an immature Northern Bottlenose whale found her way into the River Thames, to the glee and fascination of Londoners and world media. Many Londoners stopped their daily activities to watch the progress of the whale, a few even dunking into the Thames to aid the struggling creature. The world watched with apprehension as the young whale, disoriented and repeatedly stranding herself in the shallows, was lifted to safety onto a barge and began her trip back to the sea, but to no avail. The young whale died of stress and dehydration before she reached the Thames estuary. One year later, her bones were put on display in London, where they will find a permanent home in the research collections of the British Museum of Natural History.⁸

Had this young whale ventured into the Thames a thousand years earlier, how different would her experience have been? Crowds would have gathered on the river bank, just as they did in 2006. Her bones would be cleaned and used, albeit in a manner quite unlike they were in 2006. The real difference, though, is what would constitute a happy ending to the story. In 2006, we longed for the whale's salvation, her

⁷ Firearms have been suggested and tested as a more humane manner of killing the whales, but the Faroese contend that their *grindaknivur* are both more effective, killing whales in a matter of seconds, and less dangerous in the often tumultuous post-drive waters, when an errant shot could prove deadly to the whalers.

⁸ "Thames whale skeleton on display," *BBC News Online*, http://news.bbc.co.uk/2/hi/uk_news/england/6283695.stm (accessed 21 January 2007).

return to the sea and her pod. In the Middle Ages, a happy ending would have been rather different. It would have involved a great bloody fight, followed by a great feast, where endless stories were spun of the monstrous whale that stranded one day on the Thames Bank.

APPENDIX

MYSTICETE AND ODONTOCETE—WHALES OF THE NORTH ATLANTIC¹

Mysticete: Balaenidae

Balaena mysticetus: Bowhead whale/Greenland whale

Length: 14–18 m
Weight: 60–100 tons
Group size: 1–6; up to 60
Distribution: Arctic ocean, Davis Strait, Iceland to Jan Mayen, Svalbard. Southern limit at 65°N.

Eubalaena glacialis: Northern Right whale

Length: 11–18 m
Weight: 30–100 tons
Group size: 1–3; up to 12
Distribution: Inshore and at sea in North Atlantic. Observations in Faroes and Norwegian coast. Estimation is difficult given small remnant population.

Mysticete: Balaenopteridae

Balaenoptera acutorostrata: Minke whale

Length: 7–10 m
Weight: 5–10 tons

¹ Compiled from S. Eðisson, Jón Ásgeir í Aðaldal, and Jón Baldur Hlíðberg, *Icelandic Whales Past and Present* (Reykjavík: Forlagið, 1997); Chris Booth and Jean Booth, *The Mammals of Orkney* (Kirkwall: Chris and Jean Booth, 1994); Mark Carwadine, *Whales, Dolphins and Porpoises* (New York: DK Publishing, 1995); Carl Christian Kinze, *Marine Mammals of the North Atlantic*, trans. D. A. Christie (Princeton: Princeton University Press, 2001); Lyall Watson, *Sea Guide to Whales of the World* (New York: E. P. Dutton, 1981); “Whale Strandings UK species list,” Natural History Museum, London, <http://www.nhm.ac.uk/research-curation/projects/strandings/species.html> (accessed June 2007). Distribution information largely taken from Kinze. * indicates infrequent presence in Norse North Atlantic as defined by this study (50°N–70°N).

Group size: 1–3, up to 100
Distribution: Oceanic and coastal throughout North Atlantic. Distribution is northern in summer, southern in winter. In winter, from Norwegian coast to White Sea, Iceland, Faroes. In autumn, Scottish W. coast. In summer, northern North Sea and Skagerrak, common in Irish Sea and W. Greenland.

Balaenoptera borealis: Sei whale

Length: 12–18 m
Weight: 20–30 tons
Group size: 2–5, up to 30
Distribution: North Atlantic, especially southern, temperate and subtropical oceanic. Avoids colder Arctic waters, but seen in summer in Iceland, Faroes, Norway, Scotland. Rare in North and Baltic seas. North Atlantic migrations in spring and autumn.

Balaenoptera musculus: Blue whale

Length: 23–28 m
Weight: 100–125 tons
Group size: 1–2, up to 5+
Distribution: Wide ranging in deep, oceanic North Atlantic. Distribution in waters of Norway, Iceland, Greenland, Scotland, Ireland, Labrador, Newfoundland, W. Greenland.

Balaenoptera physalus: Fin whale

Length: 17–24 m
Weight: 30–80 tons
Group size: 3–7, up to 100 (historically).
Distribution: Open sea and inshore, especially deep fjords. Range from Norway to Svalbard, Iceland, North Sea, Greenland, Labrador.

Megaptera novaeangliae: Humpback whale

Length: 11.5–15 m
Weight: 25–30 tons
Group size: 2–15+

Distribution: North Atlantic, oceanic and coastal. Summer in Greenland, Iceland, Norway, White Sea, North Sea and Baltic, W. Greenland.

Mysticete: Eschrichtiidae

Eschrichtius robustus: Grey whale

Length: 11–15 m
Weight: 16–35 tons
Group size: 1, 2–18
Distribution: Extinct, 17th–18th century.

Odontocete: Physeteridae

Physeter macrocephalus: Sperm whale

Length: 8–19 m
Weight: 20–50 tons
Group size: 10–15, to 100s
Distribution: Females, south of 45°N in oceanic North Atlantic and some females on Irish west coast. Males off coasts of Greenland, Norway. Migrate south in autumn. Regular strandings in North Sea.

Odontocete: Kogiidae

Kogia breviceps: Pygmy sperm whale*

Length: 2.7–3.4 m
Weight: 315–400 kg
Group size: 3–6, to 10
Distribution: Deeper, warmer N. Atlantic, esp. S. 40°.

Odontocete: Monodontidae

Delphinapterus leucas: Beluga whale/White whale

Length: 3–5 m
Weight: 0.4–1.5 tons

Group size: 5–10, to 1000s
Distribution: Arctic, inshore seas, north coast of Iceland, Norwegian coast, occasionally North Sea and Baltic, Gulf of St. Lawrence.

Monodon monoceros: Narwhal

Length: 3.8–5 m
Weight: 0.8–1.6 tons
Group size: 2–10, to 100s
Distribution: Oceanic Arctic seas, N. Baffin Bay, NE Greenland, Svalbard, Jan Mayen, rare in White Sea, known to stray in N. Iceland, Scotland waters.

Odontocete: Ziphiidae

Hyperoodon ampullatus: Northern Bottlenose whale

Length: 5.8–9.8 m
Weight: 5.8–7.5 tons
Group size: 1–35+
Distribution: Deep, offshore North Atlantic, with patchy distribution, locally very common. Found on entire Norwegian coast, Iceland, Jan Mayen, Faroes, Scotland. Strays into North and Baltic seas, E. Greenland, Davis Strait, N. Labrador, Nova Scotia. Migrates from summer waters in north to winter areas in south, returns to Faroes in March and Jan Mayen in June.

Mesoplodon bidens: Sowerby's Beaked whale

Length: 4–5.5 m
Weight: 1–1.3 tons
Group size: 1–10
Distribution: Oceanic, temperate seas. North Atlantic, central deep-water. Strays along NW European coast, more typical in Eastern North Atlantic. Peak stranding in autumn. Rarely known in North Sea.

Ziphius cavirostris: Cuvier's Beaked whale

- Length: 5.1–7 m
Weight: 2–3 tons
Group size: 1–10, to 25+
Distribution: Offshore, warm-temperate oceanic seas, including British, Irish coasts, Sweden, North Sea, Newfoundland, Gulf Stream.

Mesoplodon mirus: True's Beaked whale*

- Length: 4.9–5.3 m
Weight: 1–1.5 tons
Group size: unknown
Distribution: Deep temperate seas, especially Ireland, Hebrides, Nova Scotia.

Mesoplodon densirostris: Blainville's Beaked whale*

- Length: 4.7–6 m
Weight: 1–3.5 tons
Group size: 1, 2–10
Distribution: Warm-temperate, subtropical, tropical, Atlantic north to 40°N, including Wales, Nova Scotia.

*Odontocete: Delphinidae**Orcinus orca*: Killer whale

- Length: 4.6–9.8 m
Weight: 2.6–9 tons
Group size: 10–50
Distribution: Atlantic population widespread. Oceanic and coastal, colder seas. Iceland, Norway, Scotland, W. Greenland, Canada.

Globicephala melas: Long-Finned Pilot whale

- Length: 3.8–6 m
Weight: 1.8–3.5 tons
Group size: 10–50, to 1000s
Distribution: Oceanic North Atlantic, Greenland and Norwegian coasts, Faroes, North Sea, Labrador, Greenland, Iceland.

Delphinus delphis: Common dolphin

Length: 1.7–2.5 m
Weight: 70–135 kg
Group size: 10–500, to 2000
Distribution: Tropical, subtropical, warm-temperate @ 10–28°C, pelagic and coastal, Norwegian coast, North Sea, Newfoundland.

Tursiops truncatus: Bottlenose dolphin

Length: 1.9–4 m
Weight: 150–650 kg
Group size: 10 to 500
Distribution: Inshore and at sea North Atlantic tropical, subtropical, warm-temperate, including English channel, northern Scotland, southern North Sea. Strays in Iceland, Faroes, Norway, and Gulf Stream.

Lagenorhynchus acutus: Atlantic white-sided dolphin

Length: 1.9–2.9 m
Weight: 165–250 kg
Group size: 50 to 1000
Distribution: Temperate, subarctic North Atlantic, White Sea, Norwegian coast, Scotland, Shetland, Faeroes, Iceland, W. Greenland, Labrador.

Lagenorhynchus albirostris: White-beaked dolphin

Length: 2.4–3 m
Weight: 180–350 kg
Group size: 30; 100s to 1000s
Distribution: Temperate, subarctic coastal and shelf N. Atlantic, White Sea, Norwegian coast, Labrador and southwest Greenland.

Lagenodelphis hosei: Fraser's dolphin

Length: 2–2.7 m
Weight: 160–210 kg
Group size: 100s to 1000s
Distribution: Tropical and oceanic N. Atlantic. Sporadic sightings/insufficient information.

Stenella coeruleoalba: Striped dolphin

- Length: 1.8–2.5 m
 Weight: 90–170 kg
 Group size: 100–500, to 1000s
 Distribution: Normally not north of 50°N, but recently along Scotland's north Coast, North Sea, Danish waters. Sightings on Norwegian coast to 64°N, Iceland, Faroes, and Newfoundland, stray sightings in W. Greenland.

*Grampus griseus: Risso's dolphin**

- Length: 2.6–4 m
 Weight: 275–600 kg
 Group size: 3–50, to 100s
 Distribution: Subtropical, warm-temperature oceanic seas, can be close inshore. North Atlantic, Irish Sea, northernmost Trondheimsfjord. Found occasionally North Sea and north to Newfoundland.

*Pseudorca crassidens: False Killer whale**

- Length: 4–6 m
 Weight: 1.1–2.2 tons
 Group size: 30–50, to 100s
 Distribution: Oceanic warm-water, esp. south of 40°N. Some travel north with Gulf Stream, some North Sea, Faroes.

*Odontocete: Phocoenidae**Phocoena phocoena: Harbor porpoise*

- Length: 1.3–1.9 m
 Weight: 50–90 kg
 Group size: Up to 10, to 100s+
 Distribution: Common. Coastal and shallow offshore waters, especially White Sea, North Sea, Danish waters, English Channel, Irish and Celtic seas, Norwegian coast, Scotland, Faroes, Iceland, Newfoundland, Labrador, W. Greenland, some E. Greenland.

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